## **Exposure Draft**

11 November 2025

Carbon Credits (Carbon Farming Initiative) (Avoided Re-clearing and Native Reforestation) Methodology Determination 2025

## Contents

Part 1—Pre	liminary	1
	1 Name	1
	2 Commencement	1
	3 Authority	1
	4 Duration	1
	5 Definitions	1
	6 Factors and parameters from external sources	6
Part 2—Nat	ive Reforestation and Avoided Re-clearing Projects  Native reforestation and forest protection projects	6
Part 3—Pro	ject requirements	
	1—General	7
Division	8 Operation of this Part	-
<b>D.</b>	•	
Division	2—Information required in application	7
	9 Information required in application	7
Division	3—Eligibility requirements	12
	10 Project must include project activity on eligible land	12
	11 Project activity requirements	12
	12 Eligible land for native reforestation CEAs	14
	13 Eligible land for avoided forest re-clearing CEAs	16
	14 Eligible land for avoided sub-forest re-clearing CEAs	
	15 Permanence periods	19
Division	4—Stratification of project area	19
	16 Initial stratification of project area	19
Subo	livision 4.1—Stratification of native reforestation CEAs	19
	17 Requirements for native reforestation CEAs	19
	18 Plantings CEAs	20
	19 Natural regeneration CEAs	21
	20 Mixed plantings and natural regeneration CEAs	
	21 Restrictions on activities in native reforestation CEAs	
	22 Re-stratification of a native reforestation CEA	22
Subo	livision 4.2—Stratification of avoided forest re-clearing CEAs	24
	23 Requirements for avoided forest re-clearing CEAs	24
	24 Restrictions on activities in avoided forest re-clearing CEAs	25
	25 Re-stratification of an avoided forest re-clearing CEA	25
Subo	livision 4.3— Stratification of avoided sub-forest re-clearing CEAs	26
	26 Requirements for avoided sub-forest re-clearing CEAs	26
	27 Restrictions on activities in avoided sub-forest re-clearing CEAs	
	28 Re-stratification of an avoided sub-forest re-clearing CEA	
Subo	livision 4.4—Defining and mapping exclusion areas	29
Subt	29 Defining and mapping exclusion areas	
Division	5—Newness and additionality	29
Division	30 Requirement in lieu of newness requirement	
Divisia	· · · · · · · · · · · · · · · · · · ·	30
Division	6—Project plan	
	31 Preparation of project plan	
	32 Amendment and publication of project plan	
	33 Computative with project pian	

Division 7—	Gateway requirements	33
34	Native reforestation CEA gateway requirements	33
	Failure to meet the native reforestation CEA gateway requirements	
	Avoided forest re-clearing CEA gateway requirement	
37	Failure to meet the avoided forest re-clearing CEA gateway requirement	38
38	Avoided sub-forest re-clearing CEA gateway requirements	39
39	Failure to meet the avoided sub-forest re-clearing CEA gateway requirements	41
Part 4— Credit	ing period	42
	Crediting period	42
Part 5—Net aba	ntement amount	43
Division 1—	Preliminary	43
	Operation of this Part	43
	Included carbon pools, emission sources and greenhouse gases	
	Summary of method for calculating net abatement amount	
Division 2—	FullCAM modelling	48
44	FullCAM modelling	48
45	Modelling scenarios in FullCAM	48
	Development of representative FullCAM model plots	
	Native reforestation CEA baseline scenario simulation	
48	Native reforestation CEA project scenario simulation	49
49	Avoided forest re-clearing CEA baseline scenario simulation	50
50	Avoided forest re-clearing CEA project scenario simulation	51
51	Avoided sub-forest re-clearing CEA baseline scenario simulation	51
52	Avoided sub-forest re-clearing CEA project scenario simulation	51
Division 3—	Calculation of the net abatement amount	52
Subdivis	ion 3.1—Net abatement amount	52
Subdivis		52
Subdivis 53	ion 3.1—Net abatement amount	52
Subdivis 53 Subdivis	tion 3.1—Net abatement amount  Calculating the net abatement amount for a project	<b>52</b> 52 <b>52</b>
Subdivis 53 Subdivis 54	ion 3.1—Net abatement amount  Calculating the net abatement amount for a project	<b>52</b> 52 <b>52</b> 52
Subdivis 53 Subdivis 54 55	con 3.1—Net abatement amount  Calculating the net abatement amount for a project	<b>52</b> 52 <b>52</b> 5253
Subdivis 53 Subdivis 54 55	con 3.1—Net abatement amount  Calculating the net abatement amount for a project	<b>52</b> 52 <b>52</b> 5253
Subdivis 53 Subdivis 54 55 56	con 3.1—Net abatement amount  Calculating the net abatement amount for a project	<b>52</b> 52 <b>52</b> 5253
Subdivis 53 Subdivis 54 55 56 57 Subdivis	Calculating the net abatement amount for a project	52 52 52 53 53 54
Subdivis 53 Subdivis 54 55 56 57 Subdivis	con 3.1—Net abatement amount  Calculating the net abatement amount for a project	<b>52</b> 52 52 52 535354 5555
Subdivis 53 Subdivis 54 55 56 57 Subdivis 58	Calculating the net abatement amount for a project	<b>52</b> 52 52 52 535354 5555
<b>Subdivis</b> 53 <b>Subdivis</b> 54 55 56 57 <b>Subdivis</b> 58 59	Calculating the net abatement amount for a project	<b>52</b> 52 <b>52</b> 5354 <b>55</b> 5555
Subdivis	Calculating the net abatement amount for a project	<b>52</b> 52 <b>52</b> 5354 <b>55</b> 5555
Subdivis	Calculating the net abatement amount  Calculating the net abatement amount for a project	<b>52</b> 52 52 52 53 53 54 55 55 55 55 56 57
Subdivis	Calculating the net abatement amount  Calculating the net abatement amount for a project	<b>52</b> 52 <b>52</b> 5354 <b>55</b> 5555555657 <b>58</b> 58
Subdivis 53 Subdivis 54 55 56 57 Subdivis 58 60 61 Subdivis 62 63 64	Calculating the net abatement amount for a project	<b>52</b> 52 52 53 53 54 55 55 55 56 57 <b>58</b> 58 59
Subdivis 53 Subdivis 54 55 56 57 Subdivis 58 60 61 Subdivis 62 63 64	Calculating the net abatement amount for a project	<b>52</b> 52 52 53 53 54 55 55 55 56 57 <b>58</b> 58 59
Subdivis 53 Subdivis 54 55 56 57 Subdivis 58 59 60 61 Subdivis 62 63 64 65	Calculating the net abatement amount for a project	<b>52</b> 52 52 53 53 54 55 55 55 56 57 <b>58</b> 58 59
Subdivis	Calculating the net abatement amount for a project	52 52 52 53 53 54 55 55 55 56 57 58 58 58 60 61
Subdivis	Calculating the net abatement amount for a project	52 52 52 53 53 54 55 55 55 56 57 58 58 58 60 61
Subdivis	Calculating the net abatement amount for a project	52 52 52 53 53 54 55 55 56 57 58 58 58 60 61
Subdivis	Calculating the net abatement amount for a project	52 52 52 53 53 54 55 55 56 56 57 58 58 60 61 62 62

Division 2—Monitoring requirements	62
69 Monitoring requirements	62
Division 3—Record-keeping requirements	63
70 Records that must be kept	63
Division 4—Reporting requirements	65
71 Information in offsets reports	65
Division 5—Reporting under section 77A of the Act	68
72 No division of project area	68
Division 6—Notification requirements	68
73 Mandatory notifications	68
Schedule 1—Native reforestation eligible region	70
Schedule 2—Biomass survey requirements	82
1 Determination of native forest biomass	82
2 Step 1—Plot design	82
3 Step 2—Allocation of waypoints and plots	83
4 Step 3—Pilot survey	84
5 Step 4—Number of plots	84
6 Step 5—Preparation of biomass survey	85
7 Step 6—Measurements within plots	86
8 Step 7—Biomass of plots	86
9 Step 8—Edge corrections for plots crossing carbon estimation area boundarie	
10 Step 9— Validation of sample size	87
11 Step 10—Biomass adjustment factor	90

## Part 1—Preliminary

## 1 Name

This instrument is the Carbon Credits (Carbon Farming Initiative) (Avoided Reclearing and Native Reforestation) Methodology Determination 2025.

#### 2 Commencement

(1) Each provision of this determination specified in column 1 of the table commences, or is taken to have commenced, in accordance with column 2 of the table. Any other statement in column 2 has effect according to its terms.

Commencement information				
Column 1	Column 2	Column 3		
Provisions	Commencement	Date/Details		
1. The whole of this determination	[to be determined].			

Note: This table relates only to the provisions of this determination as originally made. It will not be amended to deal with any later amendments of this determination.

(2) Any information in column 3 of the table is not part of this determination. Information may be inserted in this column, or information in it may be edited, in any published version of this determination.

## 3 Authority

This determination is made under subsection 106(1) of the *Carbon Credits* (Carbon Farming Initiative) Act 2011.

## 4 Duration

This determination remains in force for the period that:

- (a) begins when this determination commences; and
- (b) ends on the day before this determination would otherwise be repealed under subsection 50(1) of the *Legislation Act 2003*.

## 5 Definitions

Note: Several expressions used in this determination are defined in section 5 of the Act, including the following:

- (a) eligible offsets project;
- (b) permanence period;
- (c) project area.

In this determination:

*above-ground biomass* means all live biomass in a tree above the soil substrate and includes the stem and crown.

Act means the Carbon Credits (Carbon Farming Initiative) Act 2011.

avoided forest re-clearing project—see section 7.

avoided sub-forest re-clearing project—see section 7.

*below-ground biomass* means all live biomass in a tree below the soil substrate and includes the tap root or lignotuber, and the lateral roots.

**biomass** means vegetation-derived organic matter and includes living and non-living matter.

calibration means a calibration used in FullCAM.

*carbon estimation area* or *CEA* means an area of land that is within a project area in which the project activities are undertaken and that meets the requirements in Part 3, Division 4.

*carbon pool* means a reservoir which has the capacity to accumulate or release carbon, and includes any above-ground biomass, below-ground biomass and debris.

*carbon stock* of an area of land, at a specified time, means the amount of carbon (expressed in units of mass) stored within the area in:

- (a) above-ground biomass;
- (b) below-ground biomass; and
- (c) debris.

*carbon stock change* means the change in the quantity of carbon stock over a specified time, expressed in units of mass.

**CFI Mapping Guidelines** means the guidelines of that name, as published on the Department's website and as in force from time to time.

*CO*<sub>2</sub>-*e* means carbon dioxide equivalent.

*clearing* means the deliberate removal, killing or damaging of trees by mechanical or chemical means. For the avoidance of doubt, prescribed burns that remove, kill or damage trees do not constitute clearing, unless they are used in conjunction with mechanical or chemical ways of removing, killing or damaging trees.

**comprehensively cleared**—land is **comprehensively cleared** if it is cleared by mechanical or chemical means such that, immediately after the event, the canopy of any remaining trees that survive the event cover no more than 10% of the land, defined at a scale no larger than 30m x 30m.

*crown cover* means the proportion of ground area of a defined size covered by the vertical projection of tree crowns.

*debris* means above-ground and below-ground dead plant material, other than soil organic matter.

*determination* means a legislative instrument made under section 106 of the Act or as varied under section 114 of the Act.

*disturbance event* means an event, whether natural or caused by humans, that affects the carbon stocks, and the accumulation of carbon in the carbon stocks, within a CEA.

*eligibility date,* for land proposed to be included in a CEA, is the date of the section 22 application or section 29 application for the land to be included in the CEA.

*establishment* means the act of establishing a native forest through plantings or natural regeneration in accordance with the requirements of this determination.

exclusion area—see section 29.

*fuel emissions* means emissions of carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), or methane (CH<sub>4</sub>) arising from fossil fuel use in implementing the reforestation project.

**FullCAM** means the latest publicly released version on the Department's website of the Full Carbon Accounting Model that is used to model forest carbon stocks for the purposes of Australia's National Greenhouse Gas Inventory and includes related databases and spatial inputs used by FullCAM for its calculations.

*FullCAM Guidelines* means the guidance for using FullCAM for this determination, as published on the Department's website and as in force from time to time.

**GIS** means a geographic information system designed to capture, store, manipulate, analyse, manage, and present all types of geographical data.

*IBRA subregion* means a subregion defined by the Interim Biogeographic Regionalisation for Australia (IBRA) landscape classification framework version 7.0.

landscape planting means a planting in an urban centre or locality that is:

- (a) in a residential place (for example, in a backyard, park or on a nature strip);
- (b) on the grounds of a sporting facility, factory or other commercial facility;
- (c) on the grounds of a hospital, school or other institution; or
- (d) in a carpark or cemetery.

**management action** means any land management activity that could impact the level of the carbon stocks in plantings, natural regeneration or native forests in a CEA.

*native forest* means an area of land that is dominated by trees that:

- (a) are native to the local area;
- (b) have crown cover of at least 20% of the area of land; and
- (c) have reached a height of at least 2 metres.

A particular area of land is not forest unless it is at least 0.2 of a hectare and each 0.2 of a hectare of the area satisfies the requirements of paragraphs (a), (b) and (c).

native forest cover—land has native forest cover if it is dominated by trees that:

- (a) are native to the local area;
- (b) have attained a crown cover of at least 20% of the area of land; and
- (c) have reached a height of at least 2 metres.

A particular area of land does not have native forest cover unless it is at least 0.2 of a hectare and each 0.2 of a hectare of the area satisfies the requirements of paragraphs (a)-(c).

*native reforestation eligible region* means the IBRA subregions listed in Schedule 1.

## native forest potential—land has native forest potential if:

- (a) the reference ecosystem for the land generally has native forest cover across its natural distribution; and
- (b) having regard to its condition, slope and aspect, and the proposed project activities, there is a high likelihood it will support a native forest.

A particular area of land does not have native forest potential unless it is at least 0.2 of a hectare and each 0.2 of a hectare of the area satisfies the requirements of paragraphs (a) and (b).

native reforestation project—see section 7.

native reforestation project activity means native reforestation through plantings, natural regeneration or a mix of plantings and natural regeneration.

native reforestation and avoided re-clearing project—see section 7.

*native to the local area*, in relation to a tree species, means a tree species that forms part of the land's reference ecosystem or is native to the IBRA subregion in which the land is located.

**natural disturbance event** means an event primarily caused and driven by natural factors that affects the carbon stocks, and the accumulation of carbon in the carbon stocks, within a CEA. Natural disturbance events include wildfires, even where the fires are ignited by human action, and floods, even when the flooding is affected by works constructed by humans.

*natural regeneration* means regrowth of trees that are native to the local area from the germination of in situ seed, or the growth of in situ seedlings, saplings, rootstock or lignotuber.

**net abatement amount**, for a reforestation project, means the carbon dioxide equivalent net abatement amount for the project in the reporting period for the purposes of paragraph 106(1)(c) of the Act.

NGER Measurement Determination means the National Greenhouse and Energy Reporting (Measurement) Determination 2008 or successor determinations made under subsection 10(3) of the National Greenhouse and Energy Reporting Act 2007 concerning the measurement or estimation of greenhouse gas emissions from specified sources.

NGER Regulations means the National Greenhouse and Energy Reporting Regulations 2008 or successor regulations made under the National Greenhouse and Energy Reporting Act 2007 concerning the measurement or estimation of greenhouse gas emissions from specified sources.

## permanent planting means a planting:

- (a) that is not cleared, harvested or thinned (other than ecological thinning carried out in accordance with sections 21, 24 or 27); and
- (b) that is not a landscape planting.

## planting means:

- (c) as a verb, to put or set in the ground species that are eligible under this determination using:
  - (i) tube-stock; or
  - (ii) direct seeding, including in rows or broadcast;

for the purposes of establishing a native forest under this determination;

(d) as a noun, an area of trees established using direct seeding or tube-stock.

#### project activities means:

- (a) for a native reforestation project the activities prescribed in subsection 11(1);
- (b) for an avoided forest re-clearing project the activities prescribed in subsection 11(2);
- (c) for an avoided sub-forest re-clearing project the activities prescribed in subsection 11(3); and
- (d) for a native reforestation and avoided re-clearing project the activities prescribed in subsection 11(4).

project plan—see section 31.

reference ecosystem—see subsection 12(6).

reforestation start date—see subsection 17(3).

*section 22 application*, in relation to an offsets project, means an application under section 22 of the Act for the declaration of the project as an eligible offsets project.

**section 27 declaration**, in relation to an eligible offsets project, means a declaration under section 27 of the Act that the project is an eligible offsets project.

*section 29 application*, in relation to an area of land, means an application made under regulations or legislative rules made for the purposes of section 29 of the Act to vary the section 27 declaration in relation to a project in relation to the area.

*soil organic matter* means organic materials less than 2 mm in size that are found in soil that are, or have been, part of living organisms.

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

Note: Multi-stemmed trees are treated as a single plant for estimating above-ground biomass.

**stratification** means the division of a project area into one or more CEAs and, if required, exclusion areas.

*ecological thinning* means the selective removal of trees to enhance native biodiversity and ensure the land better reflects the compositional, structural and functional characteristics of its reference ecosystem.

*tree* means a perennial plant that has primary supporting structures consisting of secondary xylem.

## 6 Factors and parameters from external sources

- (1) If a calculation in this determination includes a factor or parameter that is defined or calculated by reference to another instrument or writing, the factor or parameter to be used for a reporting period is the factor or parameter referred to in, or calculated by reference to, the instrument or writing as in force at the end of the reporting period.
- (2) Subsection (1) does not apply if:
  - (a) this determination specifies otherwise; or
  - (b) it is not possible to define or calculate the factor or parameter by reference to the instrument or writing as in force at the end of the reporting period.

# Part 2—Native Reforestation and Avoided Re-clearing Projects

## 7 Native reforestation and forest protection projects

- (1) For the purposes of paragraph 106(1)(a) of the Act, this determination applies to an offsets project if the project involves:
  - (a) establishment of a native forest on land that has previously been comprehensively cleared for agriculture:
    - (i) exclusively or predominately through permanent plantings;
    - (ii) exclusively or predominately through natural regeneration; or

- (iii) through a mix of permanent plantings and natural regeneration; or
- (b) the avoidance of re-clearing of secondary native forest that has regenerated after being comprehensively cleared for agriculture;
- (c) the avoidance of re-clearing of native woody vegetation that has regenerated after being comprehensively cleared for agriculture and that, on the eligibility date, has forest potential but does not have native forest cover; or
- (d) a combination of two or more of (a), (b) and (c).
- (2) A project covered by subsection (1)(a) only is a *native reforestation project*.
- (3) A project covered by subsection (1)(b) only is an *avoided forest re-clearing project*.
- (4) A project covered by subsection (1)(c) only is an *avoided sub-forest reclearing project*.
- (5) A project covered by subsection (1)(d) is a *native reforestation and avoided re-clearing project*.

Note: For the avoidance of doubt, a native reforestation and avoided re-clearing project can involve a combination of the project activities described in subsections (1)(b) and (c), even though it does not involve native reforestation in the terms described in subsection (1)(a).

## Part 3—Project requirements

## **Division 1—General**

## 8 Operation of this Part

For the purposes of paragraph 106(1)(b) of the Act, this Part sets out requirements that must be met for the following projects to be an eligible offsets project:

- (a) native reforestation project;
- (b) avoided forest re-clearing project;
- (c) avoided sub-forest re-clearing project; and
- (d) native reforestation and avoided re-clearing project.

## Division 2—Information required in application

## 9 Information required in application

- (1) A section 22 application for a project, and a section 29 application for a project, must:
  - (a) identify the proposed boundaries of the project area;

- (b) specify the areas of land in the proposed project area that are proposed to be included in CEAs;
- (c) for each proposed CEA, specify whether the CEA is a:
  - (i) native reforestation CEA and, if so, whether it is a plantings CEA, natural regeneration CEA or mixed plantings and natural regeneration CEA;
  - (ii) avoided forest re-clearing CEA; or
  - (iii) avoided sub-forest re-clearing CEA;
- (d) provide evidence that each area of land identified for inclusion in a CEA is eligible land for the specified CEA type;
- (e) for each proposed native reforestation CEA:
  - (i) provide an estimate of the crown cover provided by native trees on the land proposed to be included in the CEA at the eligibility date, defined at 0.01-hectare scale, in accordance with subsection (4);
  - (ii) provide an estimate of the crown cover provided by native trees across 0.2-hectare aggregations of relevant land at the eligibility date in accordance with subsection (5);
- (f) for each proposed avoided forest re-clearing CEA and avoided subforest re-clearing CEA:
  - (i) provide an estimate of the crown cover provided by native trees on the land proposed to be included in the CEA that have naturally regenerated after the last comprehensive clearing event and that are 2 or more metres in height at the eligibility date, defined at 0.01-hectare scale, in accordance with subsection (6); and
  - (ii) provide an estimate of the crown cover provided by native trees that have naturally regenerated after the last comprehensive clearing event and that are 2 or more metres in height across 0.2-hectare aggregations of relevant land at the eligibility date in accordance with subsection (7);
- (g) for each proposed avoided sub-forest re-clearing CEA:
  - (i) provide an estimate of the crown cover provided by native trees on the land proposed to be included in the CEA at the eligibility date, defined at 0.01-hectare scale, in accordance with subsection (4); and
  - (ii) provide an estimate of the crown cover provided by native trees that have naturally regenerated after the last comprehensive clearing event and that are 2 or more metres in height across 0.2-hectare aggregations of relevant land at the eligibility date in accordance with subsection (7);

- (h) an up-to-date copy of the project plan prepared in accordance with Division 6; and
- (i) specify whether the proponent opts to undertake biomass surveys for avoided forest re-clearing CEA and avoided sub-forest re-clearing CEA (where relevant).

Note: A decision to opt to undertake biomass surveys for avoided forest re-clearing CEA and avoided sub-forest re-clearing CEA is final and cannot subsequently be changed.

- (2) The boundaries of the project area and CEAs must be mapped in accordance with the CFI Mapping Guidelines.
- (3) Land can only be included in one CEA and assigned to one CEA type.
- (4) For the purposes of subsections (1)(e)(i) and (1)(g)(i), crown cover provided by native trees on the land proposed to be included in the CEA at the eligibility date, defined at 0.01-hectare scale, must be estimated as follows.
  - (a) Divide the land proposed to be included in the CEA into 10m x 10m square cells.
  - (b) Assess the crown cover provided by native trees in each cell by estimating the proportion of the cell covered by the vertical projection of the crowns of native trees.
  - (c) Where an area of land proposed to be included in the CEA does not cover the entirety of a 10m x 10m cell, map the area in accordance with the CFI Mapping Guidelines and treat it as if it was a 10m x 10m cell for the purposes of this determination, including by estimating the proportion of the mapped area covered by the vertical projection of the crowns of native trees.
- (5) For the purposes of subsection (1)(e)(ii), crown cover provided by native trees across 0.2-hectare aggregations of relevant land at the eligibility date must be estimated as follows.
  - (a) Create 0.2-hectare aggregations of contiguous 10m x 10m cells from inside or outside the proposed CEA.
  - (b) All 10m x 10m cells for the CEA from subsection (4) must be included in a 0.2-hectare aggregation.
  - (c) The 10m x 10m cells from inside the proposed CEA that are included in a 0.2-hectare aggregation under paragraph (a) must be the cells delineated for the CEA under subsection (4).
  - (d) 10m x 10m cells from outside the proposed CEA can only be included in a 0.2-hectare aggregation if they are contiguous with a 10m x 10m cell from inside the proposed CEA from the same aggregation.
  - (e) A 0.2-hectare aggregation can share 10m x 10m cells from inside or outside of the proposed CEA with another 0.2-hectare aggregation.
     However, each 0.2 ha aggregation must have at least five 10m x 10m cells from inside the proposed CEA that are not shared with another

- 0.2-hectare aggregation. For the avoidance of doubt, a 10m x 10m cell that is included in a 0.2-hectare aggregation for a CEA may be included in another CEA for the same project.
- (f) Assess the crown cover provided by native trees in each 0.2-hectare aggregation by estimating the proportion of the land in the aggregation covered by the vertical projection of the crowns of native trees.
  - Note 1: For the avoidance of doubt,  $10m \times 10m$  cells that touch at the corners only are contiguous for these purposes.
  - Note 2: The eligibility of land for inclusion in native reforestation CEAs is determined using both  $10m \times 10m$  cells and 0.2-ha aggregations of  $10m \times 10m$  cells (s 12(1)(c) & (e)). The requirement for CEA stratification to be done using  $10m \times 10m$  cells means only land containing planted or naturally regenerating trees are included in CEAs, which ensures conservativism in the sequestration estimates provided by FullCAM. The 0.2 ha aggregations provide the basis for evaluating whether land included in CEAs has the potential to achieve native forest cover (crown cover  $\geq 20\%$  from native trees that are  $\geq 2m$  in height, defined at 0.2 ha scale). The 0.2-ha aggregations are also used for the purposes of assessing compliance with the gateway requirements (Part 3, Div 7).
- (6) For the purposes of subsection (1)(f)(i), crown cover provided by native trees on the land proposed to be included in the CEA that have naturally regenerated after the last clearing event and that are 2 or more metres in height at the eligibility date, defined at 0.01-hectare scale, must be estimated as follows.
  - (a) Divide the land proposed to be included in the CEA into 10m x 10m square cells.
  - (b) Assess the crown cover provided by native trees that have naturally regenerated after the last clearing event and that are 2 or more metres in height in each cell by estimating the proportion of the cell covered by the vertical projection of the crowns of relevant native trees.
  - (c) Where an area of land proposed to be included in the CEA does not cover the entirety of a 10m x 10m cell, map the area in accordance with the CFI Mapping Guidelines and treat it as if it was a 10m x 10m cell for the purposes of this determination, including by estimating the proportion of the cell covered by the vertical projection of the crowns of relevant native trees.
  - (d) The assessment of crown cover for these purposes must exclude crown cover provided by planted trees.
- (7) For the purposes of subsection (1)(f)(ii) and (1)(g)(ii), crown cover provided by native trees that have naturally regenerated after the last clearing event and that are 2 or more metres in height across 0.2-hectare aggregations of relevant land at the eligibility date must be estimated as follows.
  - (a) Create 0.2-hectare aggregations of contiguous 10m x 10m cells from inside or outside the proposed CEA.

- (b) For a proposed avoided forest re-clearing CEA:
  - (i) all 10m x 10m cells for the CEA from subsection (6) must be included in a 0.2-hectare aggregation; and
  - (ii) the 10m x 10m cells from inside the proposed CEA that are included in a 0.2-hectare aggregation under paragraph (a) must be the cells delineated for the CEA under subsection (6).
- (c) For a proposed avoided sub-forest re-clearing CEA:
  - (i) all 10m x 10m cells for the CEA from subsection (4) must be included in a 0.2-hectare aggregation; and
  - (ii) the 10m x 10m cells from inside the proposed CEA that are included in a 0.2-hectare aggregation under paragraph (a) must be the cells delineated for the CEA under subsection (4).
- (d) Cells from outside the proposed CEA can only be included in a 0.2-hectare aggregation if they are contiguous with a 10m x 10m cell from inside the proposed CEA from the same aggregation.
- (e) A 0.2-hectare aggregation can share 10m x 10m cells from inside or outside of the proposed CEA with another 0.2-hectare aggregation. However, each 0.2 ha aggregation must have at least five 10m x 10m cells from inside the proposed CEA that are not shared with another 0.2-hectare aggregation. For the avoidance of doubt, a 10m x 10m cell that is included in a 0.2-hectare aggregation for a CEA may be included in another CEA for the same project.
- (f) Assess the crown cover provided by native trees that have naturally regenerated after the last clearing event and that are 2 or more metres in height in each 0.2-hectare aggregation by estimating the proportion of the land in the aggregation covered by the vertical projection of the crowns of native trees.
- (g) The assessment of crown cover for these purposes must exclude crown cover provided by planted trees.
  - Note 1: For the avoidance of doubt,  $10m \times 10m$  cells that touch at the corners only are contiguous for these purposes.
  - Note 2: The eligibility of land for inclusion in avoided forest re-clearing CEAs and avoided sub-forest re-clearing CEAs is determined using  $10m \times 10m$  cells, 0.2-ha aggregations of the  $10m \times 10m$  cells and cells no larger than  $30m \times 30m$  (s 13(1) & 14(1)) The requirement for CEA stratification to be done using  $10m \times 10m$  cells means only land containing regenerating trees are included in CEAs, which ensures conservativism in the sequestration estimates provided by FullCAM. The 0.2 ha aggregations provide the basis for evaluating whether land included in CEAs has native forest cover and/or the potential to achieve native forest cover (crown cover  $\geq 20\%$  from native trees that are  $\geq 2m$  in height, defined at 0.2 ha scale). The 0.2-ha aggregations are also used for the purposes of assessing compliance with the gateway requirements (Part 3, Div 7). The cells up to  $30m \times 30m$  in size are used to determine whether the land has previously been comprehensively cleared for agriculture. Larger cells are allowed to be used for

these purposes because of the coarser resolution  $(30m \times 30m)$  of older satellite data that may be used to detect and evidence past clearing.

- (8) The application must include:
  - (a) details of the method used to estimate the crown cover provided by native trees for the purposes of subsection (1)(e);
  - (b) a digital map prepared in accordance with the CFI Mapping Guidelines that shows the location of the assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(4) and 9(5);
  - (c) details of the method used to estimate the crown cover provided by native trees that have naturally regenerated after the last clearing event and that are 2 or more metres in height for the purposes of subsection (1)(f); and
  - (d) a digital map prepared in accordance with the CFI Mapping Guidelines that shows the location of the assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(6) and 9(7).
- (9) The application must include time-stamped and geo-referenced remotely sensed imagery covering:
  - (a) for proposed native reforestation CEAs the period of 7 years before the eligibility date for the land; and
  - (b) for proposed avoided forest re-clearing CEAs and avoided sub-forest re-clearing CEAs the period of 25 years before the eligibility date for the land.

## **Division 3—Eligibility requirements**

## 10 Project must include project activity on eligible land

A project must involve the conduct of one or more project activities on land that is eligible land for the specified CEA type.

## 11 Project activity requirements

- (1) A native reforestation project must establish a native forest:
  - (a) on land that has previously been comprehensively cleared for agriculture that is eligible land for inclusion in a native reforestation CEA and either a plantings CEA, natural regeneration CEA or a mixed plantings and natural regeneration CEA;
  - (b) through:
    - (i) if the native reforestation CEA is a plantings CEA exclusively or predominately permanent plantings;

- (ii) if the native reforestation CEA is a natural regeneration CEA exclusively or predominately natural regeneration; or
- (iii) if the CEA is a mixed plantings and natural regeneration CEA
   a mix of permanent plantings and natural regeneration; and
- (c) that consists of a mixture of trees that are native to the local area in which the land is located.
- (2) An avoided forest re-clearing project must prevent the native trees on land included in avoided forest re-clearing CEAs from being cleared and manage the land so the native forest matures.
- (3) An avoided sub-forest re-clearing project must prevent the native trees on land included in avoided sub-forest re-clearing CEAs from being cleared and manage the land so it achieves native forest cover and the native forest then matures.
- (4) A native reforestation and avoided re-clearing project must:
  - (a) on land included in a native reforestation CEA establish a native forest:
    - (i) on land that has previously been comprehensively cleared for agriculture that is eligible land for inclusion in a native reforestation CEA and either a plantings CEA, natural regeneration CEA or a mixed plantings and natural regeneration CEA; and
    - (ii) through:
      - (A) if the native reforestation CEA is a plantings CEA exclusively or predominately permanent plantings;
      - (B) if the native reforestation CEA is a natural regeneration CEA exclusively or predominately natural regeneration; or
      - (C) if the native reforestation CEA is a mixed plantings and natural regeneration CEA a mix of permanent plantings and natural regeneration; and
    - (iii) that consists of a mixture of trees that are native to the local area in which the land is located; and
  - (b) on land included in an avoided forest re-clearing CEA prevent the native trees on land included in relevant CEAs from being cleared and manage the land so the native forest matures; and
  - (c) on land included in an avoided sub-forest re-clearing CEA prevent the native trees on land included in relevant CEAs from being cleared and manage the land so it achieves native forest cover and the native forest then matures.

(5) Any plantings established in a native reforestation CEA, avoided forest reclearing CEA or avoided sub-forest re-clearing CEA must be permanent plantings.

Note: Plantings may be established in avoided forest re-clearing CEAs and avoided subforest re-clearing CEAs as part of the corrective actions taken to address the failure of an area of land to satisfy the gateway requirements (Part 3, Div 7).

## 12 Eligible land for native reforestation CEAs

- (1) For this determination, land is *eligible land* for inclusion in a native reforestation CEA if:
  - (a) it is within the native reforestation eligible region;
  - (b) it has previously been comprehensively cleared for agriculture;
  - (c) it forms part of a 10m x 10m cell, delineated under subsection 9(4), that had crown cover from native trees that was less than 10% at the eligibility date;
  - (d) native trees on the land have not been cleared for at least 7 years before the eligibility date; and
  - (e) having regard to its reference ecosystem and the condition of the land, the land has native forest potential.
- (2) Land is within the *native reforestation eligible region* if it is in an IBRA subregion listed in Schedule 1.
- (3) For the purposes of subsection (1)(b), land is taken to have previously been comprehensively cleared for agriculture if:
  - (a) there is evidence it has been used for an agricultural purpose at any time in the 50 years prior to the eligibility date;
  - (b) the reference ecosystem for the land has trees that are generally at least 5 metres in height and that provide crown cover of at least 25%;
  - (c) the land has not been subject to a natural disturbance event in the 10 years prior to the eligibility date that could reasonably explain the relative absence of native trees.

Note: Evidence that can be used for the purposes of subsection (3)(a) to demonstrate that land has been used for an agricultural purpose at any time in the 50 years prior to the eligibility date includes land use mapping prepared by the Commonwealth or a State or Territory Government, or by an agency of the Commonwealth or a State or Territory Government.

(4) To determine whether an area of land satisfies the requirement in subsection (1)(e) to have native forest potential, the land must be assessed using the 0.2-hectare aggregations of relevant land delineated under subsection 9(5). For land to meet the requirements in subsection (1)(e), it must form part of an

assessed 0.2-hectare aggregation of relevant land that meets the following requirements.

- (a) The 0.2-hectare aggregation must have native forest potential.
- (b) If the 0.2-hectare aggregation includes land that is outside of the CEA:
  - (i) all groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA must have native forest potential; and
  - (ii) all 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA must have native forest potential.
- (c) If the 0.2-hectare aggregation includes land in 10m x 10m cells that are shared with another 0.2-hectare aggregation:
  - (i) all groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA and that are not shared with another 0.2-hectare aggregation must have native forest potential; and
  - (ii) all 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA and that are not shared with another 0.2-hectare aggregation must have native forest potential.
- (5) For the purposes of subsections (4)(b) and (4)(c), native forest potential must be assessed across the relevant 10m x 10m cells in the 0.2-hectare aggregation as if the assessed area was 0.2 hectares.
- (6) For the purposes of this section, native forest potential must be demonstrated by providing:
  - (a) details of the reference ecosystem for the land;
  - (b) evidence that the reference ecosystem generally has native forest cover across its natural distribution;
  - (c) details of the plant species to be planted or regenerated, including their likely height and crown cover at maturity; and
  - (d) details of the condition of the land, and its slope and aspect.
- (7) For the purposes of this determination, *reference ecosystem* means the native ecosystem type or types that were most likely to be present on the land prior to it being cleared or pre-1750 (whichever is later), having regard to the biophysical characteristics of the land and the type of ecosystem it is currently likely to support.

(8) For the purposes of this determination, native ecosystems must be identified and described in accordance with the National Vegetation Inventory System (NVIS), as it exists at the time, at the association (Level 5) or sub-association level (Level 6).

## 13 Eligible land for avoided forest re-clearing CEAs

- (1) For this determination, land is *eligible land* for inclusion in an avoided forest re-clearing CEA if:
  - (a) it is within Australia, excluding external territories;
  - (b) it is in an area for which FullCAM data exist;
  - (c) it forms part of a 10m x 10m cell, delineated under subsection 9(6), that had crown cover from native trees that have naturally regenerated after the last comprehensive clearing event and that were 2 or more metres in height that was equal to or greater than 20% at the eligibility date;
  - (d) it forms part of a 0.2-hectare aggregation of relevant land, delineated under subsection 9(7), that had crown cover from native trees that have naturally regenerated after the last comprehensive clearing event and that were 2 or more metres in height that was equal to or greater than 20% at the eligibility date;
  - (e) it has been comprehensively cleared for agriculture prior to 1 January 2025 and no more than 25 years prior to the date of the section 22 application;
  - (f) it is not covered by the crowns of native trees that are likely to be more than 35 years old at the date of the section 22 application;
  - (g) native trees on the land have not been cleared since 1 January 2025; and
  - (h) at the eligibility date, the native trees on the land were able to be comprehensively cleared for an agricultural purpose without legal restriction.
- (2) To determine whether an area of land satisfies the requirements in subsection (1)(e), the land must be divided into square cells of a standard size that are no larger than 30m x 30m and each cell must be individually assessed against the requirements. Where an area of land does not cover the entirety of a cell, it must be assessed and treated as if it was a full cell for the purposes of this determination. For land to meet the requirements in subsection (1)(d), it must form part of an assessed cell that satisfies the requirements.
- (3) To satisfy subsection (1)(h), the owner of the land must have a legal entitlement to comprehensively clear the native trees on the land for an agricultural purpose without having to:
  - (a) obtain a government approval (however described) under a law of the Commonwealth, a State or a Territory;

- (b) comply with a requirement under a law of the Commonwealth, a State or a Territory to allow the cleared area to regenerate;
- (c) retain trees on the land with prescribed characteristics (e.g. species, height or diameter at a specific height) under a law of the Commonwealth, a State or a Territory; or
- (d) provide compensation of any kind to mitigate the environmental impacts of the clearing event, including by undertaking or acquiring environmental offsets or setting aside other areas for conservation purposes, under a law of the Commonwealth, a State or a Territory.
- (4) For the purposes of subsection (1)(h), a requirement to notify a government agency under a law of the Commonwealth, a State or a Territory of an intention to clear or of a past clearing event does not, on its own, constitute a relevant legal restriction on an entitlement to comprehensively clear native trees.

## 14 Eligible land for avoided sub-forest re-clearing CEAs

- (1) For this determination, land is *eligible land* for inclusion in an avoided subforest re-clearing CEA if:
  - (a) it is within Australia, excluding external territories;
  - (b) it is in an area for which FullCAM data exists;
  - (c) it forms part of a 10m x 10m cell, delineated under subsection 9(4), that had crown cover from native trees that was equal to or greater than 10% at eligibility date;
  - (d) it forms part of a 0.2-hectare aggregation of relevant land, delineated under subsection 9(7), that had crown cover from native trees that have naturally regenerated after the last comprehensive clearing event and that were 2 or more metres in height that was less than 20% at the eligibility date;
  - (e) it has been comprehensively cleared for agriculture prior to 1 January 2025 and no more than 25 years prior to the date of the section 22 application;
  - (f) it is not covered by the crowns of native trees that are likely to be more than 35 years old at the date of the section 22 application;
  - (g) native trees on the land have not been cleared since 1 January 2025;
  - (h) at the eligibility date, the native trees on the land were able to be comprehensively cleared for an agricultural purpose without legal restriction; and
  - (i) having regard to its reference ecosystem and the condition of the land, the land has native forest potential.
- (2) To determine whether an area of land satisfies the requirements in subsection (1)(e), the land must be divided into square cells of a standard size that are no

- larger than 30m x 30m and each cell must be individually assessed against the requirements. Where an area of land does not cover the entirety of a cell, it must be assessed and treated as if it was a full cell for the purposes of this determination. For land to meet the requirements in subsection (1)(e), it must form part of an assessed cell that satisfies the requirements.
- (3) To satisfy subsection (1)(h), the owner of the land must have a legal entitlement to comprehensively clear the native trees on the land for an agricultural purpose without having to:
  - (a) obtain a government approval (however described) under a law of the Commonwealth, a State or a Territory;
  - (b) comply with a requirement under a law of the Commonwealth, a State or a Territory to allow the cleared area to regenerate;
  - (c) retain trees on the land with prescribed characteristics (e.g. species, height or diameter at a specific height) under a law of the Commonwealth, a State or a Territory; or
  - (d) provide compensation of any kind to mitigate the environmental impacts of the clearing event, including by undertaking or acquiring environmental offsets or setting aside other areas for conservation purposes, under a law of the Commonwealth, a State or a Territory.
- (4) For the purposes of subsection (1)(h), a requirement to notify a government agency under a law of the Commonwealth, a State or a Territory of an intention to clear or of a past clearing event does not, on its own, constitute a relevant legal restriction on an entitlement to comprehensively clear native trees.
- (5) To determine whether an area of land satisfies the requirement in subsection (1)(i) to have native forest potential, the land must be assessed using the 0.2-hectare aggregations of relevant land delineated under subsection 9(7). For land to meet the requirements in subsection (1)(i), it must form part of an assessed 0.2-hectare aggregation of relevant land that meets the following requirements.
  - (a) The 0.2-hectare aggregation must have native forest potential.
  - (b) If the 0.2-hectare aggregation includes land that is outside of the CEA:
    - (i) all groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA must have native forest potential; and
    - (ii) all 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA must have native forest potential.
  - (c) If the 0.2-hectare aggregation includes land in 10m x 10m cells that are shared with another 0.2-hectare aggregation:

- (i) all groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA and that are not shared with another 0.2-hectare aggregation must have native forest potential; and
- (ii) all 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA and that are not shared with another 0.2-hectare aggregation must have native forest potential.
- (6) For the purposes of subsections (5)(b) and (5)(c), native forest potential must be assessed across the relevant 10m x 10m cells in the 0.2-hectare aggregation as if the assessed area was 0.2 hectares.

## 15 Permanence periods

An avoided forest re-clearing project, avoided sub-forest re-clearing project or native reforestation and avoided re-clearing project must have a permanence period of at least 50 years.

## Division 4—Stratification of project area

## 16 Initial stratification of project area

The project proponent must define one or more areas in the project area in which the project activities are undertaken in accordance with this Division.

## **Subdivision 4.1— Stratification of native reforestation CEAs**

## 17 Requirements for native reforestation CEAs

- (1) A native reforestation CEA must:
  - (a) have an area of at least 0.2 hectares;
  - (b) consist exclusively of eligible land for native reforestation CEAs;
  - (c) consist exclusively of land on which the project activities specified in subsections 11(1) or 11(4)(a) are undertaken;
  - (d) have native forest potential or native forest cover throughout the permanence period, provided the native forest cover is achieved after the section 27 declaration for the project; and
  - (e) not include land that has previously been included in a CEA;
  - (f) be mapped in accordance with the CFI Mapping Guidelines.
- (2) To determine whether an area of land satisfies the requirement in subsection (1)(d) to have native forest potential or native forest cover, the land must be assessed using the 0.2-hectare aggregations of relevant land delineated under subsection 9(5). For land to meet the requirements in subsection (1)(d), it must

- form part of an assessed 0.2-hectare aggregation of relevant land that has native forest potential or native forest cover (as relevant).
- (3) A native reforestation CEA must consist exclusively of either plantings, natural regeneration or mixed plantings and natural regeneration that:
  - (a) have the same reforestation start date; and
  - (b) are managed in a consistent manner.
- (4) The *reforestation start date* for a native reforestation CEA means:
  - (a) if the CEA is a plantings CEA or mixed plantings and natural regeneration CEA the date on which trees that are likely to form part of the dominant canopy layer were last planted in the CEA prior to the end of the first reporting period; and
  - (b) if the CEA is a natural regeneration CEA the latter of the date of the section 27 declaration and the date the CEA was included in the project.

Note: Subsection (3)(a) means that mid-storey and ground layer plantings can be undertaken in the CEA without affecting the reforestation start date.

- (5) The outer boundary of a native reforestation CEA must follow the outer boundary of the cells that were assessed as meeting the requirements of subsection 12(1)(c).
- (6) The boundary surrounding any exclusion area within a native reforestation CEA must follow the boundary of the cells that were assessed as meeting the requirements of subsection 12(1)(c) that border the exclusion area.
- (7) The boundaries of each native reforestation CEA must be defined in each offsets report submitted to the Regulator in which the CEA is described as a native reforestation CEA.

## 18 Plantings CEAs

- (1) A CEA in which the native forest is established exclusively or predominately through permanent plantings is known as a *plantings CEA*.
- (2) A plantings CEA must satisfy the following requirements.
  - (a) The CEA consist exclusively of eligible land for native reforestation CEAs.
  - (b) At least 400 trees must be planted per hectare across the CEA.
  - (c) Tree plantings must occur in each 10m x 10m cell, delineated under subsection 9(4), in the CEA.
  - (d) The plantings and any natural regeneration in the CEA must consist of species that are native to the local area.
  - (e) The plantings in the CEA must be permanent plantings.

(3) For the purposes of subsection (2)(b), the number of planted trees in the CEA must be determined for each 1 hectare of land in the CEA or part thereof.

Note: Subsection (3) means that the requirement in subsection (2)(a) must be met for each 1-hectare area of land in the CEA rather than based on the average number of planted trees across the entire CEA.

## 19 Natural regeneration CEAs

- (1) A CEA in which the native forest is established exclusively or predominately through natural regeneration is known as a *natural regeneration CEA*.
- (2) A natural regeneration CEA must satisfy the following requirements.
  - (a) The CEA consist exclusively of eligible land for native reforestation CEAs.
  - (b) No more than 100 trees can be planted per hectare across the CEA.
  - (c) The natural regeneration and any plantings in the CEA must consist of species that are native to the local area.
  - (d) The plantings in the CEA must be permanent plantings.
- (3) For the purposes of subsection (2)(b), the number of planted trees in the CEA must be determined for each 1 hectare of land in the CEA or part thereof.

Note: Subsection (3) means that the requirement in subsection (2)(a) must be met for each 1-hectare area of land in the CEA rather than based on the average number of planted trees across the entire CEA.

## 20 Mixed plantings and natural regeneration CEAs

- (1) A CEA in which the native forest is established through a mix of plantings and natural regeneration is known as a *mixed plantings and natural regeneration CEA*.
- (2) A mixed plantings and natural regeneration CEA must satisfy the following requirements.
  - (a) The CEA consist exclusively of eligible land for native reforestation CEAs.
  - (b) No fewer than 100 trees and no more than 399 trees can be planted per hectare across the CEA.
  - (c) Tree plantings must occur in each 10m x 10m cell, delineated under subsection 9(4), in the CEA.
  - (d) The plantings and natural regeneration in the CEA must consist of species that are native to the local area.
  - (e) The plantings in the CEA must be permanent plantings.
- (3) For the purposes of subsection (2)(b), the number of planted trees in the CEA must be determined for each 1 hectare of land in the CEA or part thereof.

Note: Subsection (3) means that the requirement in subsection (2)(a) must be met for each 1-hectare area of land in the CEA rather than based on the average number of planted trees across the entire CEA.

#### 21 Restrictions on activities in native reforestation CEAs

- (1) Species that are not native to the local area must not be planted in a native reforestation CEA.
- (2) Native trees must not be cleared or otherwise damaged in a native reforestation CEA, except for ecological thinning that meets the following requirements.
  - (a) An area of land in a native reforestation CEA may only be thinned once over the permanence period.
  - (b) Ecological thinning must not occur where crown cover from native trees is less than 30%.
  - (c) Ecological thinning must not reduce crown cover from native trees to less than 30%.
  - (d) Ecological thinning must not reduce crown cover from native trees by more than 20% (in absolute terms).
  - (e) Ecological thinning must not reduce crown cover from native trees to less than 75% of the expected crown cover from native trees in the reference ecosystem.
- (3) Land included in a native reforestation CEA must be managed to mitigate the risk of damage to the plantings or natural regeneration from livestock, feral animals and weeds.
- (4) Biomass must not be removed from a native reforestation CEA, except for:
  - (a) debris that is removed in accordance with traditional Indigenous practices or native title rights; and
  - (b) the removal of seeds, provided no more than 20% of the seeds from plants of any individual native species in the CEA are harvested in a calendar year (whether for personal or commercial use).
- (5) Fertiliser must not be used in a native reforestation CEA, except for:
  - (a) fertiliser found in tubestock used for plantings; and
  - (b) a single application added when planting seedlings.

## 22 Re-stratification of a native reforestation CEA

- (1) A native reforestation CEA may be re-stratified only as provided in this section.
- (2) A native reforestation CEA must be re-stratified if one or more of the following occurs.

- (a) The land ceases to be managed in a consistent manner across the CEA.
- (b) Any 10m x 10m cell (as delineated under subsection 9(4)), 0.2-hectare aggregation of relevant land (as delineated under subsection 9(5)) or 1-hectare part of the CEA (as relevant):
  - (i) does not meet the requirements in section 17;
  - (ii) does not meet the requirements in section 18, 19 or 20 (as relevant); or
  - (iii) does not meet a native reforestation CEA gateway requirement in Part 3, Division 7.
- (c) The growth of the plantings or natural regeneration is not reasonably consistent across the CEA such that the land cannot be validly modelled as a single area under Part 5.
- (d) Native trees in the CEA are cleared or otherwise deliberately damaged, other than in accordance with subsection 21(2).

Note: If a 0.2-hectare aggregation of relevant land triggers the requirements in subsection (2)(a), only the land in the CEA that forms part of the aggregation must be re-stratified.

- (3) If land in a native reforestation CEA is required to be re-stratified under subsections (2)(a), (b) or (c), it must be either:
  - (a) included in a new native reforestation CEA so that all the land in the new CEA meets the requirements for inclusion in a native reforestation CEA and can be validly modelled as a single area under Part 5; or
  - (b) defined and mapped as an exclusion area in accordance with subdivision 4.4.
- (4) If land in a native reforestation CEA is required to be re-stratified under subsection (2)(d), it is not eligible for inclusion in a CEA and it must be defined and mapped as an exclusion area in accordance with subdivision 4.4.
- (5) The Regulator may require the proponent to re-stratify a native reforestation CEA if there is a breach of the requirements in section 21 to remove the land area on which the breach occurred, or that was affected by the breach, and a buffer area around the land, from the CEA.
- (6) Land that is removed from a native reforestation CEA under paragraph (5) is not eligible for inclusion in a CEA and is deemed never to have been eligible for inclusion in a CEA.
- (7) Where the land is re-stratified under subsections (3)(b) or (4) into an exclusion area, it is deemed never to have been eligible for inclusion in a native reforestation CEA.
- (8) If plantings, natural regeneration or mixed plantings and natural regeneration are carried out on land previously defined as an exclusion area, and the land

- meets the requirements for inclusion in a native reforestation CEA, it may be re-stratified as a native reforestation CEA.
- (9) Land can only be validly modelled as a single area under Part 5 if modelling the area as a single area for the purpose of estimating the carbon stocks in the project scenario is likely to produce unbiased estimates.

## Subdivision 4.2—Stratification of avoided forest re-clearing CEAs

## 23 Requirements for avoided forest re-clearing CEAs

- (1) An avoided forest re-clearing CEA must:
  - (a) have an area of at least 0.2 hectares;
  - (b) consist exclusively of:
    - (i) eligible land for avoided forest re-clearing CEAs;
    - (ii) land on which the project activities specified in subsections 11(2) or (11)(4)(b) are undertaken;
    - (iii) land that has native forest cover or, if native forest cover is lost after the section 27 declaration for the project because of a natural disturbance event, native forest potential, throughout the permanence period; and
    - (iv) land that has not previously been included in a CEA; and
  - (c) be mapped in accordance with the CFI Mapping Guidelines.
- (2) To determine whether an area of land satisfies the requirement in subsection (1)(b)(iii) to have native forest cover or native forest potential, the land must be assessed using the 0.2-hectare aggregations of relevant land delineated under subsection 9(7). For land to meet the requirements in subsection (1)(b)(iii), it must form part of an assessed 0.2-hectare aggregation of relevant land that has native forest cover or native forest potential (as relevant).
- (3) The outer boundary of an avoided forest re-clearing CEA must follow the outer boundary of the cells that were assessed as meeting the requirements of subsection 13(1)(c).
- (4) The boundary surrounding any exclusion area within an avoided forest reclearing CEA must follow the boundary of the cells (or partial cells) that were assessed as meeting the requirements of subsection 13(1)(c) that border the exclusion area.
- (5) The boundaries of each avoided forest re-clearing CEA must be defined in each offsets report submitted to the Regulator in which the CEA is described as an avoided forest re-clearing CEA.

## 24 Restrictions on activities in avoided forest re-clearing CEAs

- (1) Species that are not native to the local area must not be planted in an avoided forest re-clearing CEA.
- (2) Native trees in an avoided forest re-clearing CEA must not be cleared or otherwise damaged, except for ecological thinning that meets the following requirements.
  - (a) An area of land in an avoided forest re-clearing CEA may only be thinned once over the permanence period.
  - (b) Ecological thinning must not occur where crown cover from native trees is less than 30%.
  - (c) Ecological thinning must not reduce crown cover from native trees to less than 30%.
  - (d) Ecological thinning must not reduce crown cover from native trees by more than 20% (in absolute terms).
  - (e) Ecological thinning must not reduce crown cover from native trees to less than 75% of the expected crown cover from native trees in the reference ecosystem.
- (3) Land included in an avoided forest re-clearing CEA must be managed to mitigate the risk of damage to the native forest and any plantings or natural regeneration from livestock, feral animals and weeds.
- (4) Biomass must not be removed from an avoided forest re-clearing CEA, except for:
  - (a) debris that is removed in accordance with traditional Indigenous practices or native title rights; and
  - (b) the removal of seeds, provided no more than 20% of the seeds from plants of any individual native species in the CEA are harvested in a calendar year (whether for personal or commercial use).
- (5) Fertiliser must not be used in an avoided forest re-clearing CEA, with the exception of fertiliser found in tubestock used for infill plantings, or a single application added when planting seedlings as infill plantings, that are undertaken to address the loss of native forest cover from a natural disturbance event.

## 25 Re-stratification of an avoided forest re-clearing CEA

- (1) An avoided forest re-clearing CEA may be re-stratified only as provided in this section.
- (2) An avoided forest re-clearing CEA must be re-stratified if one or more of the following occurs.
  - (a) Any land in the CEA does not meet the requirements in section 23.

- (b) Any 0.2-hectare aggregation of relevant land, delineated under subsection 9(7):
  - (i) loses native forest cover due to a natural disturbance event; or
  - (ii) does not meet the avoided forest re-clearing CEA gateway requirement in Part 3, Division 7.
- (c) Native trees in the CEA are cleared or otherwise deliberately damaged, other than in accordance with subsection 23(2).

Note: If a 0.2-hectare aggregation of relevant land triggers the requirements in subsection (2)(b), only the land in the CEA that forms part of the aggregation must be re-stratified.

- (3) If land in an avoided forest re-clearing CEA is required to be re-stratified under subsections (2)(a) or (2)(b), it must be either:
  - (a) included in a new avoided forest re-clearing CEA so that all the land in the new CEA meets the requirements for inclusion in an avoided forest re-clearing CEA and can be validly modelled as a single area under Part 5; or
  - (b) defined and mapped as an exclusion area in accordance with subdivision 4.4.
- (4) If land in an avoided forest re-clearing CEA is required to be re-stratified under subsection (2)(c), it is not eligible for inclusion in a CEA and it must be defined and mapped as an exclusion area in accordance with subdivision 4.4.
- (5) The Regulator may require the proponent to re-stratify an avoided forest reclearing CEA if there is a breach of the requirements in subsections 24(1), (3), (4) or (5) to remove the land area on which the breach occurred, or that was affected by the breach, and a buffer area around the land, from the CEA.
- (6) Land that is removed from an avoided forest re-clearing CEA under paragraph (5) is not eligible for inclusion in a CEA and is deemed never to have been eligible for inclusion in a CEA.
- (7) Where the land is re-stratified under subsection (3)(b) or subsection (4) into an exclusion area, it is deemed never to have been eligible for inclusion in an avoided forest re-clearing CEA.
- (8) If avoided forest re-clearing is carried out on land previously defined as an exclusion area, and the land meets the requirements for inclusion in an avoided forest re-clearing CEA, the land may be re-stratified as an avoided forest re-clearing CEA.

## Subdivision 4.3— Stratification of avoided sub-forest re-clearing CEAs

## 26 Requirements for avoided sub-forest re-clearing CEAs

- (1) An avoided sub-forest re-clearing CEA must:
  - (a) have an area of at least 0.2 hectares;

- (b) consist exclusively of:
  - (i) eligible land for avoided sub-forest re-clearing CEAs;
  - (ii) land on which the project activities specified in subsections 11(3) or 11(4)(c) are undertaken; and
  - (iii) land that has native forest potential or native forest cover throughout the permanence period, provided the native forest cover is achieved after the section 27 declaration for the project;
  - (iv) land that has not previously been included in a CEA; and
  - (v) land that is managed in a consistent manner; and
- (c) be mapped in accordance with the CFI Mapping Guidelines.
- (2) To determine whether an area of land satisfies the requirement in subsection (1)(b)(iii) to have native forest potential or native forest cover, the land must be assessed using the 0.2-hectare aggregations of relevant land delineated under subsection 9(7). For land to meet the requirements in subsection (1)(b)(iii), it must form part of an assessed 0.2-hectare aggregation of relevant land that has native forest potential or native forest cover.
- (3) The outer boundary of an avoided sub-forest re-clearing CEA must follow the outer boundary of the cells that were assessed as meeting the requirements of subsection 14(1)(c).
- (4) The boundary surrounding any exclusion area within an avoided sub-forest reclearing CEA must follow the boundary of the cells that were assessed as meeting the requirements of subsection 14(1)(c) that border the exclusion area.
- (5) The boundaries of each avoided sub-forest re-clearing CEA must be defined in each offsets report submitted to the Regulator in which the CEA is described as an avoided sub-forest re-clearing CEA.

## 27 Restrictions on activities in avoided sub-forest re-clearing CEAs

- (1) Species that are not native to the local area must not be planted in an avoided sub-forest re-clearing CEA.
- (2) Native trees in an avoided sub-forest re-clearing CEA must not be cleared or otherwise damaged, except for ecological thinning that meets the following requirements.
  - (a) An area of land in an avoided sub-forest re-clearing CEA may only be thinned once over the permanence period.
  - (b) Ecological thinning must not occur where crown cover from native trees is less than 30%.
  - (c) Ecological thinning must not reduce crown cover from native trees to less than 30%.

- (d) Ecological thinning must not reduce crown cover from native trees by more than 20% (in absolute terms).
- (e) Ecological thinning must not reduce crown cover from native trees to less than 75% of the expected crown cover from native trees in the reference ecosystem.
- (3) Land included in an avoided sub-forest re-clearing CEA must be managed to mitigate the risk of damage to the natural regeneration and any plantings from livestock, feral animals and weeds.
- (4) Biomass must not be removed from an avoided sub-forest re-clearing CEA, except for:
  - (a) debris that is removed in accordance with traditional Indigenous practices or native title rights; and
  - (b) the removal of seeds, provided no more than 20% of the seeds from plants of any individual native species in the CEA are harvested in a calendar year (whether for personal or commercial use).
- (5) Fertiliser must not be used in an avoided sub-forest re-clearing CEA, with the exception of fertiliser found in tubestock used for infill plantings, or a single application added when planting seedlings as infill plantings, that are undertaken to address the loss of native forest cover from a natural disturbance event.

## 28 Re-stratification of an avoided sub-forest re-clearing CEA

- (1) An avoided sub-forest re-clearing CEA may be re-stratified only as provided in this section.
- (2) An avoided sub-forest re-clearing CEA must be re-stratified if one or more of the following occurs.
  - (a) The land ceases to be managed in a consistent manner across the CEA.
  - (b) Any 10m x 10m cell (as delineated under subsection 9(4)) or 0.2-hectare aggregation of relevant land (as delineated under subsection 9(7)) (as relevant):
    - (i) does not meet the requirements in section 26; or
    - (ii) does not meet an avoided sub-forest re-clearing CEA gateway requirement in Part 3, Division 7.
  - (c) Native trees in the CEA are cleared or otherwise deliberately damaged, other than in accordance with subsection 27(2).

Note: If a 0.2-hectare aggregation of relevant land triggers the requirements in subsection (2)(b), only the land in the CEA that forms part of the aggregation must be re-stratified.

(3) If land in an avoided sub-forest re-clearing CEA is required to be re-stratified under paragraphs (2)(a) or (b), it must be either:

- (a) included in a new avoided sub-forest re-clearing CEA so that all the land in the new CEA meets the requirements for inclusion in an avoided sub-forest re-clearing CEA and can be validly modelled as a single area under Part 5; or
- (b) defined and mapped as an exclusion area in accordance with subdivision 4.4.
- (4) If land in an avoided sub-forest re-clearing CEA is required to be re-stratified under paragraph (2)(c), it is not eligible for inclusion in a CEA and it must be defined and mapped as an exclusion area in accordance with subdivision 4.4.
- (5) The Regulator may require the proponent to re-stratify an avoided sub-forest re-clearing CEA if there is a breach of the requirements in section 27 to remove the land area on which the breach occurred, or that was affected by the breach, and a buffer area around the land, from the CEA.
- (6) Land that is removed from an avoided sub-forest re-clearing CEA under paragraph (5) is not eligible for inclusion in a CEA and is deemed never to have been eligible for inclusion in a CEA.
- (7) Where the land is re-stratified under subsection (3)(b) or subsection (4) into an exclusion area, it is deemed never to have been eligible for inclusion in an avoided sub-forest re-clearing CEA.
- (8) If avoided sub-forest re-clearing is carried out on land previously defined as an exclusion area, the land may be re-stratified as an avoided sub-forest reclearing CEA.

## Subdivision 4.4—Defining and mapping exclusion areas

## 29 Defining and mapping exclusion areas

Land in each project area that is not included in a native reforestation CEA, avoided forest re-clearing CEA or avoided sub-forest re-clearing CEA must be defined and mapped as an exclusion area in accordance with the CFI Mapping Guidelines.

## Division 5—Newness and additionality

## 30 Requirement in lieu of newness requirement

- (1) For the purposes of subparagraph 27(4A)(a)(ii) of the Act, the requirement in lieu of the newness requirement for a native reforestation project, avoided forest re-clearing project, avoided sub-forest re-clearing project and native reforestation and avoided re-clearing project is that the project has not begun to be implemented, with the exceptions set out in this section.
- (2) Disregard the preparation of a plan regarding the project activities before a section 22 application has been made in relation to the project.

- (3) Disregard the purchasing or leasing of a tangible asset for the purposes of a project, or the conduct of project activities and activities undertaken to facilitate the project activities, when undertaken:
  - (a) after a section 22 application has been made in relation to the project but before the date of the section 27 declaration in relation to the project; or
  - (b) after a section 29 application has been made in relation to the project but before the date the variation of the section 27 declaration in relation to the project is made by the Regulator.

## Division 6—Project plan

## 31 Preparation of project plan

- (1) The project proponent must prepare a plan for the management of the CEAs in the project area and conduct of the project activities.
- (2) The plan for a project prepared under subsection (1) is known as the *project plan*.
- (3) The project plan must be provided to the Regulator:
  - (a) with the section 22 application; and
  - (b) with a section 29 application.
- (4) The project plan must include the following information:
  - (a) for each native reforestation CEA that has been, or is proposed to be, established in the project area:
    - (i) the boundaries of the CEA, mapped in accordance with the CFI Mapping Guidelines;
    - (ii) the reference ecosystems for the land included, or proposed to be included, in the CEA;
    - (iii) details of the tree species found in the reference ecosystems for the land included, or proposed to be included, in the CEA;
    - (iv) the actual or proposed reforestation start date;
    - (v) details of all tree species planted, or proposed to be planted, in the CEA and whether (and how) they are native to the local area:
    - (vi) details of the number of trees planted, or proposed to be planted, in each hectare of the CEA;
    - (vii) details of the methods used, or proposed to be used, to undertake plantings in the CEA;
    - (viii) details of the geometry and spacing of the plantings, or proposed plantings in the CEA;

- (ix) details of the dominant tree species naturally regenerating in the CEA and whether (and how) they are native to the local area:
- (x) an estimate of the number of trees naturally regenerating in each hectare of the CEA;
- (xi) an estimate of the likely height and crown cover of the native forest that is established through the conduct of the project activities in the CEA when it reaches maturity;
- (xii) details of any weed species in the CEA that could affect the achievement, maintenance or recovery of native forest cover over the land in the CEA (as relevant); and
- (xiii) the boundaries of the assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(4) and 9(5), mapped in accordance with the CFI Mapping Guidelines; and
- (b) for each avoided forest re-clearing CEA that has been, or is proposed to be, established in the project area:
  - (i) the boundaries of the CEA, mapped in accordance with the CFI Mapping Guidelines;
  - (ii) the reference ecosystems for the land included, or proposed to be included, in the CEA;
  - (iii) details of the tree species found in the reference ecosystems for the land included, or proposed to be included, in the CEA;
  - (iv) details of the dominant tree species in the CEA and whether (and how) they are native to the local area;
  - (v) an estimate of the likely height and crown cover of the native forest that is protected through the conduct of the project activities in the CEA when it reaches maturity;
  - (vi) details of any weed species in the CEA that could affect the maintenance of native forest cover over the land in the CEA;
  - (vii) the boundaries of the assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(6) and 9(7), mapped in accordance with the CFI Mapping Guidelines; and
  - (viii) the boundaries of the assessed cells delineated under subsection 13(3), mapped in accordance with the CFI Mapping Guidelines; and
- (c) for each avoided sub-forest re-clearing CEA that has been, or is proposed to be, established in the project area:

- (i) the boundaries of the CEA, mapped in accordance with the CFI Mapping Guidelines;
- (ii) the reference ecosystems for the land included, or proposed to be included, in the CEA;
- (iii) details of the tree species found in the reference ecosystems for the land included, or proposed to be included, in the CEA;
- (iv) details of the dominant tree species in the CEA and whether (and how) they are native to the local area;
- (v) an estimate of the likely height and crown cover of the native forest that is regenerated and protected through the conduct of the project activities in the CEA when it reaches maturity;
- (vi) details of any weed species in the CEA that could affect the attainment and maintenance of native forest cover over the land in the CEA:
- (vii) the boundaries of the assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(6) and 9(7), mapped in accordance with the CFI Mapping Guidelines; and
- (viii) the boundaries of the assessed cells delineated under subsection 14(4), mapped in accordance with the CFI Mapping Guidelines: and
- (d) details of how biosecurity risks that are, or could reasonably be, associated with the land in the project area will be managed to:
  - (i) limit risks to the environment, human health and interests of surrounding landholders; and
  - (ii) satisfy obligations under applicable Commonwealth, State or Territory laws (if any) to manage biosecurity risks; and
  - (iii) ensure alignment with the objectives and requirements of plans prepared under Commonwealth, State or Territory laws (if any) concerning the management of biosecurity risks in the region (or local government area) in which the project is located.
- (5) For the purposes of subsection 31(4)(d), *biosecurity risks* means any adverse impacts on the environment, human health and interests of surrounding landholders associated with pests, weeds, pathogens and diseases.

## 32 Amendment and publication of project plan

- (1) The project proponent may amend the project plan under this Division at any time before or after the section 27 declaration for the project.
- (2) An amended project plan must include the information required under subsection 31(4).

- (3) If a project plan is amended under this section, it must be submitted to the Regulator.
- (4) The project proponent must ask the Regulator to publish the project plan on the Emissions Reduction Fund registered kept and maintained under section 167 of the Act.
- (5) The project proponent must ensure the current project plan is publicly available on the internet.

### 33 Compliance with project plan

The requirements of this Part for the registration of a project as an eligible offsets project include the requirement that the project is conducted in accordance with the project plan.

Note: Because of this section, the Regulator will be authorised under section 32 of the Carbon Credits (Carbon Farming Initiative) Rule 2015 to unilaterally revoke the section 27 declaration for the project if the project proponent does not comply with the project plan.

# **Division 7—Gateway requirements**

#### 34 Native reforestation CEA gateway requirements

- (1) It is a requirement of this Part that all land included in a native reforestation CEA must satisfy:
  - (a) the first forest development condition in subsection (3);
  - (b) the second forest development condition in subsection (5);
  - (c) the forest attainment condition in subsection (7); and
  - (d) the forest maintenance condition in subsection (9).
- (2) The requirements in subsection (1) are the *native reforestation CEA gateway requirements*.
- (3) Land included in a native reforestation CEA satisfies the *first forest development condition* if crown cover provided by native trees on the land has increased, in absolute terms, by at least 5 per cent above the level when the land was first included in the CEA.
- (4) The project proponent must demonstrate that all land included in a native reforestation CEA satisfies the first forest development condition within 6-months of the 4<sup>th</sup> anniversary of the date when the land was first included in the CEA.
- (5) Land included in a native reforestation CEA satisfies the *second forest development condition* if crown cover provided by native trees on the land has increased, in absolute terms, by at least 10 per cent above the level when the land was first included in the CEA.
- (6) The project proponent must demonstrate that all land included in a native reforestation CEA satisfies the second forest development condition within 6-

- months of the 4<sup>th</sup> anniversary of the date when the land was assessed as meeting the first forest development condition.
- (7) Land included in a native reforestation CEA satisfies the *forest attainment* condition if the land has native forest cover.
- (8) The project proponent must demonstrate that all land included in a native reforestation CEA satisfies the forest attainment condition within 6-months of the 4<sup>th</sup> anniversary of the date when the land was assessed as meeting the second forest development condition.
- (9) Land included in a native reforestation CEA satisfies the *forest maintenance* condition if it has native forest cover.
- (10) The project proponent must demonstrate that all land included in a native reforestation CEA satisfies the forest maintenance condition:
  - (a) within 6-months of the 10<sup>th</sup> anniversary of the date when the land was assessed as meeting the forest attainment condition; and
  - (b) within 6 months of the 10<sup>th</sup> anniversary of the date when the land was last assessed as meeting the forest maintenance condition through to the end of the permanence period.
- (11) The first forest development condition and second forest development condition (as relevant) are only satisfied for an area of land in a CEA if the land forms part of an 0.2-hectare aggregation of relevant land (delineated under subsection 9(5)) that meets the following requirements.
  - (a) All groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA satisfy the relevant condition.
  - (b) All 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA satisfy the relevant condition.
  - (c) All groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA and that are not shared with another 0.2-hectare aggregation satisfy the relevant condition.
  - (d) All 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA and that are not shared with another 0.2-hectare aggregation satisfy the relevant condition.

Note 1: The requirements in subsections (11)(a) and (11)(c) must be met for each group of contiguous cells separately, not aggregated across non-contiguous groups of contiguous cells.

Note 2: The effect of subsection (11) is that, if the land forms part of a 0.2-hectare aggregation that does not satisfy (a), (b), (c) and (d), all the land in the aggregation in the CEA is deemed not to meet the relevant gateway requirement.

- (12) The forest attainment condition and forest maintenance condition (as relevant) are only satisfied for an area of land in a CEA if the land forms part of an 0.2-hectare aggregation of relevant land (delineated under subsection 9(5)) that meets the following requirements.
  - (a) The 0.2-hectare aggregation satisfies the relevant condition.
  - (b) If the 0.2-hectare aggregation includes land that is outside of the CEA:
    - (i) all groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA satisfy the relevant condition; and
    - (ii) all 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA satisfy the relevant condition.
  - (c) If the 0.2-hectare aggregation includes land in 10m x 10m cells that are shared with another 0.2-hectare aggregation:
    - (i) all groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA and that are not shared with another 0.2-hectare aggregation satisfy the relevant condition; and
    - (ii) all 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA and that are not shared with another 0.2-hectare aggregation satisfy the relevant condition.
  - Note 1: The requirements in subsections (12)(b)(i) and (12)(c)(i) must be met for each group of contiguous cells separately, not aggregated across non-contiguous groups of contiguous cells.
  - Note 2: The effect of subsection (12) is that, if the land forms part of a 0.2-hectare aggregation that does not satisfy (a), (b) and (c), all the land in the aggregation in the CEA is deemed not to meet the relevant gateway requirement.
- (13) For the purposes of subsections (12)(b) and (12)(c), native forest cover must be assessed across the relevant 10m x 10m cells in the 0.2-hectare aggregation as if the assessed area was 0.2 hectares.
- (14) Estimates of crown cover used to assess compliance with the first forest development condition, second forest development condition, forest attainment condition or forest maintenance condition must be derived using the same method that was used to estimate crown cover provided by native trees for the purposes of subsection 9(1)(e).

# 35 Failure to meet the native reforestation CEA gateway requirements

- (1) Where land in a native reforestation CEA does not satisfy the native reforestation CEA gateway requirements, the project proponent must deal with the land in accordance with this section.
- (2) Land that does not satisfy the first forest development condition, second forest development condition or forest attainment condition must be re-stratified under section 22 by either:
  - (a) including the land in a new native reforestation CEA; or
  - (b) defining and mapping the land an exclusion area in accordance with subdivision 4.4.
- (3) Where the land is re-stratified under subsection (2)(a):
  - (a) the proponent must take corrective action to address the causes of the failure to satisfy the applicable native reforestation CEA gateway requirement and amend the project plan under section 32 to reflect the proposed corrective action;
  - (b) the carbon stocks on the land must be modelled as not increasing from the date the land was assessed as not satisfying the applicable requirement until the date the requirement is satisfied; and
  - (c) land that does not satisfy the forest attainment condition within 5 years of the end of the project's crediting period is deemed never to have been eligible for inclusion in a native reforestation CEA.
- (4) Where the land is re-stratified under subsection (2)(b), it is deemed never to have been eligible for inclusion in a native reforestation CEA.
- (5) Land that does not satisfy the forest maintenance condition must be restratified under section 22 by either:
  - (a) including the land in a new native reforestation CEA; or
  - (b) defining and mapping the land an exclusion area in accordance with subdivision 4.4.
- (6) Where the land is re-stratified under subsection (5)(a):
  - (a) the proponent must take corrective action to address the causes of the failure to satisfy the forest maintenance condition and amend the project plan under section 32 to reflect the proposed corrective action;
  - (b) the carbon stocks on the land must be modelled as not increasing from the date the land was assessed as not satisfying the applicable requirement until the date the requirement is satisfied; and
  - (c) land that does not satisfy the forest maintenance condition within 12 years of the date it was assessed as being non-compliant is deemed never to have been eligible for inclusion in a native reforestation CEA.

(7) Where the land is re-stratified under subsection (5)(b), it is deemed never to have been eligible for inclusion in a native reforestation CEA.

# 36 Avoided forest re-clearing CEA gateway requirement

- (1) It is a requirement of this Part that all land included in an avoided forest reclearing CEA must satisfy the forest maintenance condition specified in subsection (2) (avoided forest re-clearing CEA gateway requirement).
- (2) Land included in an avoided forest re-clearing CEA satisfies the *forest* maintenance condition if:
  - (a) it has native forest cover; and
  - (b) crown cover provided by native trees is not more than 5 per cent below the level estimated when the land was first included in the CEA.
- (3) The project proponent must demonstrate that all land included in an avoided forest re-clearing CEA satisfies the forest maintenance condition:
  - (a) within 6-months of the 5<sup>th</sup> anniversary of the date when the land was first included in the CEA; and
  - (b) within 6 months of the 10<sup>th</sup> anniversary of the date when the land was last assessed as meeting the forest maintenance condition through to the end of the permanence period.
- (4) The forest maintenance condition is only satisfied for an area of land in a CEA if the land forms part of an 0.2-hectare aggregation of relevant land (delineated under subsection 9(7)) that meets the following requirements.
  - (a) The 0.2-hectare aggregation satisfies the requirements in subsection (2).
  - (b) If the 0.2-hectare aggregation includes land that is outside of the CEA:
    - (i) all groups of contiguous 10m x 10m cells (delineated under subsection 9(6)) from the aggregation that are inside the CEA satisfy the requirements in subsection (2); and
    - (ii) all 10m x 10m cells (delineated under subsection 9(6)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA satisfy the requirements in subsection (2).
  - (c) If the 0.2-hectare aggregation includes land in 10m x 10m cells that are shared with another 0.2-hectare aggregation:
    - (i) all groups of contiguous 10m x 10m cells (delineated under subsection 9(6)) from the aggregation that are inside the CEA and that are not shared with another 0.2-hectare aggregation satisfy the requirements in subsection (2); and

- (ii) all 10m x 10m cells (delineated under subsection 9(6)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA and that are not shared with another 0.2-hectare aggregation satisfy the requirements in subsection (2).
- Note 1: The requirements in subsections (4)(b)(i) and (4)(c)(i) must be met for each group of contiguous cells separately, not aggregated across non-contiguous groups of contiguous cells.
- Note 2: The effect of subsection (4) is that, if the land forms part of a 0.2-hectare aggregation that does not satisfy (a), (b) and (c), all the land in the aggregation in the CEA is deemed not to meet the forest maintenance condition.
- (5) For the purposes of subsections (4)(b) and (4)(c), native forest cover must be assessed across the relevant 10m x 10m cells in the 0.2-hectare aggregation as if the assessed area was 0.2 hectares.
- (6) Estimates of crown cover used to assess compliance with the forest maintenance conditions must be derived using the same method that was used to estimate crown cover provided by native trees for the purposes of subsection 9(1)(f).

# 37 Failure to meet the avoided forest re-clearing CEA gateway requirement

- (1) Where land in an avoided forest re-clearing CEA does not satisfy the avoided forest re-clearing CEA gateway requirements, the project proponent must deal with the land in accordance with this section.
- (2) Land that does not satisfy the avoided forest re-clearing CEA gateway requirement must be re-stratified under section 25 by either:
  - (a) including the land in a new avoided forest re-clearing CEA; or
  - (b) defining and mapping the land an exclusion area in accordance with subdivision 4.4.
- (3) Where the land is re-stratified under subsection (2)(a):
  - (a) the proponent must take corrective action to address the causes of the failure to satisfy the applicable native reforestation CEA gateway requirement and amend the project plan under section 32 to reflect the proposed corrective action; and
  - (b) land that does not satisfy the avoided forest re-clearing CEA gateway requirement within 12 years of the date it was assessed as being non-compliant is deemed never to have been eligible for inclusion in an avoided forest re-clearing CEA.
- (4) Where the land is re-stratified under subsection (2)(b), it is deemed never to have been eligible for inclusion in an avoided forest re-clearing CEA.

# 38 Avoided sub-forest re-clearing CEA gateway requirements

- (1) It is a requirement of this Part that all land included in an avoided sub-forest re-clearing CEA must satisfy:
  - (a) the forest development condition in subsection (3);
  - (b) the forest attainment condition in subsection (5); and
  - (c) the forest maintenance condition in subsection (7).
- (2) The requirements in subsection (1) are the *avoided sub-forest re-clearing CEA gateway requirements*.
- (3) Land included in an avoided sub-forest re-clearing CEA satisfies the *forest development condition* if crown cover provided by native trees on the land has increased, in absolute terms, by at least 5 per cent above the level when the land was first included in the CEA.
- (4) The project proponent must demonstrate that all land included in an avoided sub-forest re-clearing CEA satisfies the forest development condition within 6-months of the 5<sup>th</sup> anniversary of the date when the land was first included in the CEA.
- (5) Land included in an avoided sub-forest re-clearing CEA satisfies the *forest* attainment condition if it has native forest cover.
- (6) The project proponent must demonstrate that all land included in an avoided sub-forest re-clearing CEA satisfies the forest attainment condition within 6-months of the 5<sup>th</sup> anniversary of the date when the land was assessed as meeting the forest development condition.
- (7) Land included in an avoided sub-forest re-clearing CEA satisfies the *forest* maintenance condition if it has native forest cover.
- (8) The project proponent must demonstrate that all land included in an avoided sub-forest re-clearing CEA satisfies the forest maintenance condition:
  - (a) within 6-months of the 5<sup>th</sup> anniversary of the date when the land was assessed as meeting the forest attainment condition; and
  - (b) within 6 months of the 10<sup>th</sup> anniversary of the date when the land was last assessed as meeting the forest maintenance condition through to the end of the permanence period.
- (9) The forest development condition is only satisfied for an area of land in a CEA if the land forms part of an 0.2-hectare aggregation of relevant land (delineated under subsection 9(7)) that meets the following requirements.
  - (a) All groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA satisfy the condition.
  - (b) All 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA satisfy the condition.

- (c) All groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA and that are not shared with another 0.2-hectare aggregation satisfy the relevant condition.
- (d) All 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA and that are not shared with another 0.2-hectare aggregation satisfy the relevant condition.
- Note 1: The requirements in subsections (9)(a) and (9)(c) must be met for each group of contiguous cells separately, not aggregated across non-contiguous groups of contiguous cells.
- Note 2: The effect of subsection (9) is that, if the land forms part of a 0.2-hectare aggregation that does not satisfy (a), (b), (c) and (d), all the land in the aggregation in the CEA is deemed not to meet the forest development condition.
- (10) The forest attainment condition and forest maintenance condition (as relevant) are only satisfied for an area of land in a CEA if the land forms part of an 0.2-hectare aggregation of relevant land (delineated under subsection 9(7)) that meets the following requirements.
  - (a) The 0.2-hectare aggregation satisfies the relevant condition.
  - (b) If the 0.2-hectare aggregation includes land that is outside of the CEA:
    - (i) all groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA satisfy the relevant condition; and
    - (ii) all 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA satisfy the relevant condition.
  - (c) If the 0.2-hectare aggregation includes land in 10m x 10m cells that are shared with another 0.2-hectare aggregation:
    - (i) all groups of contiguous 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA and that are not shared with another 0.2-hectare aggregation satisfy the relevant condition; and
    - (ii) all 10m x 10m cells (delineated under subsection 9(4)) from the aggregation that are inside the CEA that are not contiguous with other cells from inside the CEA and that are not shared with another 0.2-hectare aggregation satisfy the relevant condition.

Note 1: The requirements in subsections (10)(b)(i) and (10)(c)(i) must be met for each group of contiguous cells separately, not aggregated across non-contiguous groups of contiguous cells.

- Note 2: The effect of subsection (10) is that, if the land forms part of a 0.2-hectare aggregation that does not satisfy (a), (b) and (c), all the land in the aggregation in the CEA is deemed not to meet the relevant gateway requirement.
- (11) For the purposes of subsections (10)(b) and (10)(c), native forest cover must be assessed across the relevant 10m x 10m cells in the 0.2-hectare aggregation as if the assessed area was 0.2 hectares.
- (12) Estimates of crown cover used to assess compliance with the forest development condition, forest attainment condition and forest maintenance condition must be derived using the same method that was used to estimate crown cover provided by native trees for the purposes of subsection 9(1)(g).

# 39 Failure to meet the avoided sub-forest re-clearing CEA gateway requirements

- (1) Where land in an avoided sub-forest re-clearing CEA does not satisfy the avoided sub-forest re-clearing CEA gateway requirements, the project proponent must deal with the land in accordance with this section.
- (2) Land that does not satisfy the forest development condition or forest attainment condition must be re-stratified under section 28 by either:
  - (a) including the land in a new avoided sub-forest re-clearing CEA; or
  - (b) defining and mapping the land an exclusion area in accordance with subdivision 4.4.
- (3) Where the land is re-stratified under subsection (1)(a):
  - (a) the proponent must take corrective action to address the causes of the failure to satisfy the applicable avoided sub-forest re-clearing CEA gateway requirement and amend the project plan under section # to reflect the proposed corrective action; and
  - (b) land that does not satisfy the forest attainment condition within 5 years of the end of the project's crediting period is deemed never to have been eligible for inclusion in an avoided sub-forest re-clearing CEA.
- (4) Where the land is re-stratified under subsection (1)(b), it is deemed never to have been eligible for inclusion in an avoided sub-forest re-clearing CEA.
- (5) Land that does not satisfy the forest maintenance condition must be restratified under section 28 by either:
  - (a) including the land in a new avoided sub-forest re-clearing CEA; or
  - (b) defining and mapping the land an exclusion area in accordance with subdivision 4.4.
- (6) Where the land is re-stratified under subsection (5)(a):
  - (d) the proponent must take corrective action to address the causes of the failure to satisfy the forest maintenance condition and amend the

- project plan under section 32 to reflect the proposed corrective action; and
- (e) land that does not satisfy the forest maintenance condition within 12 years of the date it was assessed as being non-compliant is deemed never to have been eligible for inclusion in an avoided sub-forest reclearing CEA.
- (7) Where the land is re-stratified under subsection (5)(b), it is deemed never to have been eligible for inclusion in an avoided sub-forest re-clearing CEA.

# Part 4— Crediting period

# 40 Crediting period

- (1) For subsection 69(2)(b) of the Act, this Part specifies the crediting period for eligible offsets projects registered under this determination.
- (2) The crediting period for a native reforestation project is:
  - (a) if the project has a 100-year permanence period 50 years;
  - (b) otherwise -25 years.
- (3) The crediting period for avoided forest re-clearing project is:
  - (a) if the project has a 100-year permanence period and, on the 25<sup>th</sup> anniversary of the project's section 27 declaration, the native trees on the land in the project's CEAs were able to be comprehensively cleared for an agricultural purpose without legal restriction 50 years;
  - (b) otherwise -25 years.
- (4) The crediting period for avoided sub-forest re-clearing project is:
  - (a) if the project has a 100-year permanence period and, on the 25<sup>th</sup> anniversary of the project's section 27 declaration, the native trees on the land in the project's CEAs were able to be comprehensively cleared for an agricultural purpose without legal restriction 50 years;
  - (b) otherwise -25 years.
- (5) The crediting period for a native reforestation and avoided re-clearing project that includes an avoided forest re-clearing CEA or avoided sub-forest re-clearing CEA is:
  - (a) if the project has a 100-year permanence period and, on the 25<sup>th</sup> anniversary of the project's section 27 declaration, the native trees on the land in the project's avoided forest re-clearing CEAs (if any) and avoided sub-forest re-clearing CEAs (if any) were able to be comprehensively cleared for an agricultural purpose without legal restriction 50 years;
  - (b) otherwise -25 years.

# Part 5—Net abatement amount

# **Division 1—Preliminary**

# 41 Operation of this Part

For paragraph 106(1)(c) of the Act, this Part specifies the method for working out the net abatement amount for a reporting period for an eligible offsets project under this determination.

# 42 Included carbon pools, emission sources and greenhouse gases

(1) The following table outlines the carbon pools, emissions sources and greenhouse gases that are relevant to calculating the net abatement amount.

Carbon pool	Greenhouse gas	Native reforestation CEAs	Avoided forest and sub-forest re- clearing CEAs
Live above-ground biomass	Carbon dioxide (CO <sub>2</sub> )	Yes	Yes
Live below-ground biomass	Carbon dioxide (CO <sub>2</sub> )	Yes	Yes
Debris	Carbon dioxide (CO <sub>2</sub> )	Yes	Yes
<b>Emission source</b>	Greenhouse gas		
Fuel use	Methane (CH <sub>4</sub> )	Yes	Yes
	Nitrous oxide (N <sub>2</sub> O)		
	Carbon dioxide (CO <sub>2</sub> )		
Fire—planned and unplanned	Methane (CH <sub>4</sub> )	Yes	No
	Nitrous oxide (N <sub>2</sub> O)		

(2) The carbon pools, emissions sources and greenhouse gases listed in the table are the only carbon pools, emissions sources and greenhouse gases that may be accounted for in calculating the net abatement amount.

# 43 Summary of method for calculating net abatement amount

- (1) The net abatement amount for a project is calculated as the sum of the abatement from all native reforestation CEAs, avoided forest re-clearing CEAs and avoided sub-forest re-clearing CEAs in the project area, minus emissions from fossil fuel combustion in the project scenario.
- (2) The *project scenario* means the scenario in which the eligible offsets project is carried out.

- (3) The *baseline scenario* means the scenario in which the eligible offsets project is not carried out. The baseline scenario represents a conservative projection of what is likely to have occurred in the absence of the project.
- (4) It is conservatively assumed that there are no planned or unplanned fires in the baseline scenario. It is also conservatively assumed that there are no CH<sub>4</sub> and N<sub>2</sub>O emissions from other agricultural land uses in the baseline scenario, including from fertiliser use and enteric fermentation (or, alternatively, that these activities and emissions are displaced to other areas).
- (5) The following is a summary of the method used to calculate the net abatement amount.
  - **Step 1:** Representative FullCAM model plots must be developed for each native reforestation CEA, avoided forest re-clearing CEA and avoided subforest re-clearing CEA in the project area. The representative model plots must be devised using the appropriate calibration for the CEA type (planting, natural regeneration or mixed planting and natural regeneration) and setting the maximum live above-ground biomass (represented by the parameter *M* in FullCAM) in the published base plots. The maximum live above-ground biomass in the representative model plot for a CEA must be set as the average across the relevant CEA from the published *M*-layer.

**Step 2:** Calculate the net abatement for each native reforestation CEA in the project area.

For the first reporting period, the net abatement amount for a native reforestation CEA must be calculated as:

- (a) the difference between the carbon stock in the project scenario at the end of the reporting period and the carbon stock in the baseline scenario;
- (b) minus  $CH_4$  and  $N_2O$  emissions from planned and unplanned fires in the reporting period.

For subsequent reporting periods, the net abatement for a native reforestation CEA must be calculated as:

- (a) the difference between the carbon stock in included carbon pools in the project scenario at the end of the reporting period and the carbon stock in included carbon pools in the project scenario at the end of the previous reporting period;
- (b) minus CH<sub>4</sub> and N<sub>2</sub>O emissions from planned and unplanned fires in the reporting period.

These calculations must be undertaken in accordance with the following substeps.

**Step 2.1:** The carbon stock in included carbon pools in the baseline scenario must be zero. This assumes that, in the absence of the project, there would be no trees or debris in the CEA and that any trees and

debris that were present on the site at project commencement would be cleared.

- **Step 2.2:** The carbon stock in included carbon pools in the project scenario at must be modelled using FullCAM and the representative model plot for the CEA. In the project scenario simulation, a relevant reforestation event (plantings, natural regeneration or mixed plantings and natural regeneration) must be scheduled to occur in the representative model plot on the CEA's reforestation start date. Any fire events that occur during the reporting period must be modelled on the date they occur.
- **Step 2.3:** The carbon stock in included carbon pools in the project scenario at the end of the reporting period must be calculated.
- **Step 2.4:** For the first reporting period, the difference between the carbon stock in the project scenario at the end of the reporting period (Step 2.3) and the carbon stock in the baseline scenario (Step 2.1) must be calculated.
- **Step 2.5:** For subsequent reporting periods, the difference between the carbon stock in the project scenario at the end of the reporting period (Step 2.3) and the carbon stock in the project scenario at the end of the previous reporting period (Step 2.3) must be calculated.
- **Step 2.6:** CH<sub>4</sub> and N<sub>2</sub>O emissions from planned and unplanned fires must be calculated for each reporting period using FullCAM, based on the extent of the fires across the CEA.
- **Step 3:** Calculate the net abatement for each avoided forest re-clearing CEA in the project area.

For the first reporting period, the net abatement amount for an avoided forest re-clearing CEA must be calculated as the difference between the carbon stock in the project scenario at the end of the reporting period and the carbon stock in the baseline scenario.  $CH_4$  and  $N_2O$  emissions from fires are not modelled for avoided forest re-clearing CEAs.

For subsequent reporting periods, the net abatement for an avoided forest reclearing CEA must be calculated as the difference between the carbon stock in included carbon pools in the project scenario at the end of the reporting period and the carbon stock in included carbon pools in the project scenario at the end of the previous reporting period.

These calculations must be undertaken in accordance with the following substeps.

**Step 3.1:** The carbon stock in included carbon pools in the baseline scenario must be calculated as the long-term average carbon stock in the CEA in a 100-year baseline scenario simulation. The baseline scenario simulation must be modelled using FullCAM and the representative model plot for the CEA. In the baseline scenario simulation, a natural regeneration event must be scheduled to occur in the representative

model plot on day 1 of the simulation and a clearing event, followed by a natural regeneration event must be scheduled to occur every 15 years thereafter until the end of the 100-year simulation period. Each clearing event and subsequent natural regeneration event must be separated by a 12-month period, which is intended to reflect the time it takes for natural regeneration to emerge after a clearing event.

- **Step 3.2:** The long-term average carbon stock in the baseline scenario must be calculated as the average carbon stock in included carbon pools over the 100-year simulation period.
- **Step 3.3:** The carbon stock in included carbon pools in the project scenario must be modelled using FullCAM and the representative model plot for the CEA. In the project scenario simulation, a natural regeneration event must be scheduled to occur in the representative model plot on day 1 of the simulation. No other events can be modelled.
- **Step 3.4:** The carbon stock in included carbon pools must be calculated at the end of the reporting period, based on the assumption that the project commenced the month after the carbon stock in the project scenario exceeded the long-term average carbon stock in the baseline scenario.
- **Step 3.5:** For the first reporting period, the difference between the carbon stock in the project scenario at the end of the reporting period (Step 3.4) and the long-term average carbon stock in the baseline scenario (Step 3.2) must be calculated.
- **Step 3.6:** For subsequent reporting periods, the difference between the carbon stock in the project scenario at the end of the reporting period (Step 3.4) and the carbon stock in the project scenario at the end of the previous reporting period (Step 3.4) must be calculated.

Note: In projects that opt for field surveys, the carbon stock estimates in the baseline and project scenarios for each avoided forest re-clearing CEA in the project area must be calculated by multiplying the FullCAM outputs by an adjustment factor. The adjustment factor is calculated as the ratio of the biomass survey estimate for aboveground biomass in the CEA (in tonnes of dry matter per hectare) to the model output for mass of aboveground tree components from the model in the year corresponding to the biomass survey.

**Step 4:** Calculate the net abatement for each avoided sub-forest re-clearing CEA in the project area.

For the first reporting period, the net abatement amount for an avoided subforest re-clearing CEA must be calculated as the difference between the carbon stock in the project scenario at the end of the reporting period and the carbon stock in the baseline scenario.  $CH_4$  and  $N_2O$  emissions from fires are not modelled for avoided sub-forest re-clearing CEAs.

For subsequent reporting periods, the net abatement for an avoided sub-forest re-clearing CEA must be calculated as the difference between the carbon stock in included carbon pools in the project scenario at the end of the

reporting period and the carbon stock in included carbon pools in the project scenario at the end of the previous reporting period.

These calculations must be undertaken in accordance with the following substeps.

- **Step 4.1:** The carbon stock in included carbon pools in the baseline scenario must be calculated as the long-term average carbon stock in the CEA in a 100-year baseline scenario simulation. The baseline scenario simulation must be modelled using FullCAM and the representative model plot for the CEA. In the baseline scenario simulation, a natural regeneration event must be scheduled to occur in the representative model plot on day 1 of the simulation and a clearing event, followed by a natural regeneration event must be scheduled to occur every 15 years thereafter until the end of the 100-year simulation period. Each clearing event and subsequent natural regeneration event must be separated by a 12-month period, which is intended to reflect the time it takes for natural regeneration to emerge after a clearing event.
- **Step 4.2:** The long-term average carbon stock in the baseline scenario must be calculated as the average carbon stock in included carbon pools over the 100-year simulation period.
- **Step 4.3:** The carbon stock in included carbon pools in the project scenario must be modelled using FullCAM and the representative model plot for the CEA. In the project scenario simulation, a natural regeneration event must be scheduled to occur in the representative model plot on day 1 of the simulation. No other events can be modelled.
- **Step 4.4:** The carbon stock in included carbon pools must be calculated at the end of the reporting period, based on the assumption that the project commenced the month after the carbon stock in the project scenario exceeded the long-term average carbon stock in the baseline scenario.
- **Step 4.5:** For the first reporting period, the difference between the carbon stock in the project scenario at the end of the reporting period (Step 4.4) and the long-term average carbon stock in the baseline scenario (Step 4.2) must be calculated.
- **Step 4.6:** For subsequent reporting periods, the difference between the carbon stock in the project scenario at the end of the reporting period (Step 4.4) and the carbon stock in the project scenario at the end of the previous reporting period (Step 4.4) must be calculated.

Note: In projects that opt for field surveys, the carbon stock estimates in the baseline and project scenarios for each avoided sub-forest re-clearing CEA in the project area must be calculated by multiplying the FullCAM outputs by an adjustment factor. The adjustment factor is calculated as the ratio of the biomass survey estimate for aboveground biomass in the CEA (in tonnes of dry matter per hectare) to the model output for mass of aboveground tree components from the model in the year corresponding to the biomass survey.

**Step 5:** CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions from fossil fuel combustion in the project scenario must be calculated, based on the volume of fossil fuels combusted used in the conduct of the project activities across the project area. It is conservatively assumed that there are no greenhouse gas emissions from fossil fuel combustion in the baseline scenario.

**Step 6:** Calculate net abatement for the project as the sum of the abatement from all native reforestation CEAs (Step 2), avoided forest re-clearing CEAs (Step 3) and avoided sub-forest re-clearing CEAs (Step 4) in the project area, minus emissions from fossil fuel combustion in the project scenario (Step 5).

# **Division 2—FullCAM modelling**

#### 44 FullCAM modelling

FullCAM must be used to model:

- (a) the carbon stock and carbon stock changes in included carbon pools in the project and baseline scenarios; and
- (b) CH<sub>4</sub> and N<sub>2</sub>O emissions from planned and unplanned fires in native reforestation CEAs.

# 45 Modelling scenarios in FullCAM

Subject to section 34, for each offsets report:

- (a) a baseline scenario simulation and project scenario simulation must be run for each CEA in existence at the end of the reporting period;
- (b) each scenario simulation must be created and run as a FullCAM simulation in accordance with this Division and the FullCAM Guidelines; and
- (c) each simulation must be created and run in the 90-day period before an offsets report is submitted to the Regulator.

Note: The FullCAM Guidelines set out how management actions and disturbance events must be modelled in FullCAM.

#### 46 Development of representative FullCAM model plots

- (1) Representative FullCAM model plots must be developed for each CEA in existence at the end of the reporting period.
- (2) The representative plots developed under subsection (1) must satisfy each of the following requirements.
  - (a) Each representative plot must simulate reforestation of 1 hectare of native forests.
  - (b) For any plantings CEAs, reforestation must be simulated to occur by way of plantings, with the age of maximum growth (represented by

- the parameter G in FullCAM) set at 6.317 years and the type 2 growth multiplier (represented by the parameter y in FullCAM) set at 1.
- (c) For any natural regeneration CEAs, reforestation must be simulated to occur by way of natural regeneration, with the age of maximum growth (represented by the parameter *G* in FullCAM) set at 12.53 years and the type 2 growth multiplier (represented by the parameter *y* in FullCAM) set at 1.
- (d) For any mixed plantings and natural regeneration CEAs, reforestation must be simulated to occur by way of plantings and natural regeneration, with the age of maximum growth (represented by the parameter *G* in FullCAM) set at 9.4235 years and the type 2 growth multiplier (represented by the parameter *y* in FullCAM) set at 1.
- (e) For any avoided forest re-clearing CEAs, reforestation must be simulated to occur by way of natural regeneration, with the age of maximum growth (represented by the parameter *G* in FullCAM) set at 12.53 years and the type 2 growth multiplier (represented by the parameter *y* in FullCAM) set at 1.
- (f) For any avoided sub-forest re-clearing CEAs, reforestation must be simulated to occur by way of natural regeneration, with the age of maximum growth (represented by the parameter *G* in FullCAM) set at 12.53 years and the type 2 growth multiplier (represented by the parameter *y* in FullCAM) set at 1.
- (g) For each CEA plot, the maximum live above-ground biomass (represented by the parameter *M* in FullCAM) must be set at the average across the CEA, calculated from the latest *M*-layer, as published from time to time.

#### 47 Native reforestation CEA baseline scenario simulation

- (1) The baseline scenario simulation for a native reforestation CEA is that the carbon stock in included carbon pools is zero at the start and end of the reporting period.
- (2) The baseline scenario simulation for a native reforestation CEA is not required to be run as a FullCAM simulation.

#### 48 Native reforestation CEA project scenario simulation

- (1) The project scenario simulation for a native reforestation CEA must consist of a reforestation event, relevant planned and unplanned fire events and natural disturbance events that are modelled using the representative model plot for the CEA, devised in accordance with section 45.
- (2) Reforestation must be modelled as commencing on the reforestation start date for the CEA.

- (3) If a fire occurs in a CEA in a reporting period, a fire event must be modelled in the project scenario simulation in accordance with the following requirements.
  - (a) The area affected by the fire must be digitally mapped in accordance with the CFI Mapping Guidelines.
  - (b) The proportion of the CEA affected by the fire must be calculated based on the mapped fire area.
  - (c) The fire must be modelled using the representative model plot for the CEA and the proportion of the CEA effected by the fire and accurately account for the extent to which the fire killed trees.
  - (d) The fire must be modelled as occurring on the day on which the fire began.
- (4) If a natural disturbance event occurs in a reporting period that reduces crown cover provided by native trees by more than 20%, the growth of the modelled forest must be paused until the crown cover provided by native trees is restored to the levels immediately prior the event.

#### 49 Avoided forest re-clearing CEA baseline scenario simulation

- (1) The baseline scenario simulation for an avoided forest re-clearing CEA must consist of a series of natural regeneration and clearing events that are modelled using the representative model plot for the CEA, devised in accordance with section 46.
- (2) The first natural regeneration event must be scheduled to occur on day 1 of the simulation period.
- (3) Following the natural regeneration event in subsection (2), clearing and natural regeneration events must be scheduled to occur every 15 years until the end of the simulation period, separated by a 12-month period between the clearing event and the subsequent natural regeneration event.
- (4) No events other than natural regeneration and clearing may be modelled.
- (5) The simulation must assume average climate conditions for the CEA area throughout the simulation period (represented by the FPI<sub>i</sub>/FPI<sub>ave</sub> in FullCAM being set at 1).
- (6) The *simulation period* is the 100-year period starting on the simulation start date.
- (7) The *simulation start date* for an avoided forest re-clearing CEA is the latter of:
  - (a) the date of the section 27 declaration; and
  - (b) the date the CEA was included in the project.

# 50 Avoided forest re-clearing CEA project scenario simulation

- (1) The project scenario simulation for avoided forest re-clearing CEA must consist of a natural regeneration event that is modelled using the representative model plot for the CEA, devised in accordance with section 46.
- (2) The natural regeneration event must be scheduled to occur on day 1 of the simulation period.
- (3) No events other than the natural regeneration event in subsection (2) may be modelled.
- (4) In the project scenario simulation, the first reporting period for the CEA must be assumed to start 1 month after the carbon stock in the project scenario exceeds the long-term average carbon stock in the baseline scenario, calculated in accordance with Division 3.

# 51 Avoided sub-forest re-clearing CEA baseline scenario simulation

- (1) The baseline scenario simulation for an avoided sub-forest re-clearing CEA must consist of a series of natural regeneration and clearing events that are modelled using the representative model plot for the CEA, devised in accordance with section 46.
- (2) The first natural regeneration event must be scheduled to occur on day 1 of the simulation period.
- (3) Following the natural regeneration event in subsection (2), clearing and natural regeneration events must be scheduled to occur every 15 years until the end of the simulation period, separated by a 12-month period between the clearing event and the subsequent natural regeneration event.
- (4) No events other than natural regeneration and clearing may be modelled.
- (5) The simulation must assume average climate conditions for the CEA area throughout the simulation period (represented by the FPI<sub>i</sub>/FPI<sub>ave</sub> in FullCAM being set at 1).
- (6) The *simulation period* is the 100-year period starting on the simulation start date.
- (7) The *simulation start date* for an avoided sub-forest re-clearing CEA is the latter of:
  - (a) the date of the section 27 declaration; and
  - (b) the date the CEA was included in the project.

#### 52 Avoided sub-forest re-clearing CEA project scenario simulation

(1) The project scenario simulation for avoided sub-forest re-clearing CEA must consist of a natural regeneration event that is modelled using the representative model plot for the CEA, devised in accordance with section 46.

- (2) The natural regeneration event must be scheduled to occur on day 1 of the simulation period.
- (3) No events other than the natural regeneration event in subsection (2) may be modelled.
- (4) In the project scenario simulation, the first reporting period for the CEA must be assumed to start 1 month after the carbon stock in the project scenario exceeds the long-term average carbon stock in the baseline scenario, calculated in accordance with Division 3.

# Division 3—Calculation of the net abatement amount

#### **Subdivision 3.1—Net abatement amount**

# 53 Calculating the net abatement amount for a project

The net abatement amount for a reporting period is calculated using the following equation.

$$NA = \left(\sum_{x=1}^{n} ANF_x + \sum_{y=1}^{n} AFR_y + \sum_{z=1}^{n} ASR_z\right) - EFF$$
 Equation 1

Where:

NA is the net abatement amount for the reporting period (in tonnes CO<sub>2</sub>-e).

ANF<sub>x</sub> is the abatement from  $x^{th}$  native reforestation CEA for the reporting period (in tonnes CO<sub>2</sub>-e), calculated in accordance with subdivision 3.2.

AFR<sub>y</sub> is the abatement from the y<sup>th</sup> avoided forest re-clearing CEA for the reporting period (in tonnes CO<sub>2</sub>-e), calculated in accordance with Division 3.3.

ASR<sub>z</sub> is the abatement from the z<sup>th</sup> avoided sub-forest re-clearing CEA for the reporting period (in tonnes CO<sub>2</sub>-e), calculated in accordance with Division 3.3.

EFF is the emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O (in tonnes CO<sub>2</sub>-e) from the combustion of fossil fuels associated with the conduct of the project activities in the project area over reporting period in the project scenario.

### Subdivision 3.2— Abatement from native reforestation CEA

#### 54 Abatement from native reforestation CEA, first reporting period

The abatement for a native reforestation CEA for the first reporting period must be calculated using the following equation.

$$ANF = (C_{end} \times \frac{44}{12}) - EBB$$
 Equation 2

Where:

ANF is the abatement from the native reforestation CEA for the reporting period (in tonnes CO<sub>2</sub>-e).

C<sub>end</sub> is the carbon stock in eligible carbon pools in the project scenario in the CEA at the end of the reporting period (in tonnes of carbon (C)), calculated in accordance with section 56.

EBB is the emissions of CH<sub>4</sub> and N<sub>2</sub>O (in tonnes CO<sub>2</sub>-e) from biomass burning associated with planned and unplanned fires in the project scenario in the reporting period, calculated in accordance with section 57.

### 55 Abatement from native reforestation CEA, subsequent reporting periods

The abatement for a native reforestation CEA for subsequent reporting periods must be calculated using the following equation.

ANF = 
$$((C_{end} - C_{prev})) \times \frac{44}{12})$$
 - EBB Equation 3

Where:

ANF is the abatement from the native reforestation CEA for the reporting period (in tonnes CO<sub>2</sub>-e).

C<sub>end</sub> is the carbon stock in eligible carbon pools in the project scenario in the CEA at the end of the reporting period (in tonnes of carbon (C)), calculated in accordance with section 56.

C<sub>prev</sub> is the carbon stock in eligible carbon pools in the project scenario in the CEA at the end of the previous reporting period (in tonnes of carbon (C)), calculated in accordance with section 56.

EBB is the emissions of CH<sub>4</sub> and N<sub>2</sub>O (in tonnes CO<sub>2</sub>-e) from biomass burning associated with planned and unplanned fires in the project scenario in the reporting period, calculated in accordance with section 57.

#### 56 Calculating carbon stock for native reforestation CEAs

The carbon stock for a native reforestation CEA in the project scenario at the end of the reporting period must be calculated as the sum of FullCAM outputs for carbon in the tree and debris pools in the project scenario simulation for the CEA determined in accordance with Division 2 and must be calculated using the following equation.

$$C_{end} = (C_t + C_d) \times a$$
 Equation 4

where:

C<sub>end</sub> is the carbon stock in eligible carbon pools in the project scenario in the native reforestation CEA at the end of the reporting period (in tonnes of carbon (C)).

C<sub>t</sub> is the carbon stock in trees in the CEA determined using FullCAM for the final month of the reporting period (in tonnes C per hectare).

C<sub>d</sub> is the carbon stock in debris for the CEA determined using FullCAM for the final month of the reporting period (in tonnes C per hectare).

a is the area of the CEA (in hectares).

# 57 Emissions from planned and unplanned fires for native reforestation CEAs

(1) Emissions of CH<sub>4</sub> and N<sub>2</sub>O (in tonnes CO<sub>2</sub>-e) from biomass burning in a native reforestation CEA associated with planned and unplanned fires in the project scenario in the reporting period must be calculated using the following equation.

$$EBB = EBB_{CH4} + EBB_{N2O}$$
 Equation 5

where:

EBB is the emissions of CH<sub>4</sub> and N<sub>2</sub>O (in tonnes CO<sub>2</sub>-e) from biomass burning in the native reforestation CEA associated with planned and unplanned fires in the project scenario in the reporting period.

EBB<sub>CH4</sub> is the emissions of methane (CH<sub>4</sub>) from biomass burning in the CEA for the reporting period (in tonnes CO<sub>2</sub>-e).

 $EBB_{N2O}$  emissions of nitrous oxide ( $N_2O$ ) from biomass burning in the CEA for the reporting period (in tonnes  $CO_2$ -e).

(2) For the purposes of subsection (1), emissions of CH<sub>4</sub> from biomass burning in the CEA for the reporting period must be calculated using the following equation.

$$EBB_{CH4} = (E_{CH4} \times a_b) \times GWP_{CH4}$$
 Equation 6

where:

EBB<sub>CH4</sub> is the emissions of methane (CH<sub>4</sub>) from biomass burning in the native reforestation CEA for the reporting period (in tonnes CO<sub>2</sub>-e).

E<sub>CH4</sub> is the mass of CH<sub>4</sub> emitted during the reporting period due to biomass burning in the CEA determined using FullCAM (in tonnes per hectare).

a<sub>b</sub> is the area burnt in the CEA during the reporting period (in hectares).

 $GWP_{CH4}$  is the 100-year global warming potential of methane as specified in the NGER Regulations.

(3) For the purposes of subsection (1), emissions of N<sub>2</sub>O from biomass burning in the CEA for the reporting period must be calculated using the following equation.

$$EBB_{N2O} = ((E_{N2O} \times a_b) \times GWP_{N2O})/1000$$
 Equation 7

where:

 $EBB_{N2O}$  emissions of nitrous oxide ( $N_2O$ ) from biomass burning in the native reforestation CEA for the reporting period (in tonnes  $CO_2$ -e).

E<sub>N2O</sub> is the mass of N<sub>2</sub>O emitted during the reporting period due to biomass burning in the CEA determined using FullCAM (in kilograms per hectare).

a<sub>b</sub> is the area burnt in the CEA during the reporting period (in hectares).

 $GWP_{N2O}$  is the 100-year global warming potential of nitrous oxide as specified in the NGER Regulations.

# Subdivision 3.3— Abatement from avoided forest re-clearing CEA

# 58 Abatement from avoided forest re-clearing CEA, first reporting period

The abatement for an avoided forest re-clearing CEA for the first reporting period must be calculated using the following equation.

$$AFR = (C_{end} - C_{baseline}) \times \frac{44}{12}$$
 Equation 8

Where:

AFR is the abatement from the avoided forest re-clearing CEA for the reporting period (in tonnes CO<sub>2</sub>-e).

C<sub>end</sub> is the carbon stock in eligible carbon pools in the project scenario in the CEA at the end of the reporting period (in tonnes of carbon (C)), calculated in accordance with section 61.

C<sub>baseline</sub> is the carbon stock in eligible carbon pools in the baseline scenario in the CEA (in tonnes of carbon (C)), calculated in accordance with section 60.

# 59 Abatement from avoided forest re-clearing CEA, subsequent reporting periods

The abatement for an avoided forest re-clearing CEA for subsequent reporting periods must be calculated using the following equation.

AFR = 
$$((C_{end} - C_{prev}) \times \frac{44}{12})$$
 Equation 9

Where:

AFR is the abatement from the avoided forest re-clearing CEA for the reporting period (in tonnes CO<sub>2</sub>-e).

C<sub>end</sub> is the carbon stock in eligible carbon pools in the project scenario in the CEA at the end of the reporting period (in tonnes of carbon (C)), calculated in accordance with section 61.

C<sub>prev</sub> is the carbon stock in eligible carbon pools in the project scenario in the CEA at the end of the previous reporting period (in tonnes of carbon (C)), calculated in accordance with section 61.

#### 60 Calculating carbon stock in baseline scenario

(1) In projects that have not opted to undertake biomass surveys, the carbon stock in included carbon pools in the baseline scenario in an avoided forest reclearing CEA must be calculated as the average carbon stock in the baseline scenario simulation for the CEA (determined in accordance with Part 5, Division 2) and must be calculated using the following equation.

$$C_{\text{baseline}} = \frac{\sum_{k=1}^{1200} (C_{t,k} + C_{d,k}) \times a}{1200}$$
 Equation 10

Where:

C<sub>baseline</sub> is the carbon stock in eligible carbon pools in the baseline scenario in the avoided forest re-clearing CEA (in tonnes of carbon (C)).

 $C_{t,k}$  is the carbon stock in trees in the CEA determined using FullCAM at the end of the  $k^{th}$  month since the baseline scenario simulation start date (in tonnes C per hectare).

 $C_{d,k}$  is the carbon stock in debris in the CEA determined using FullCAM at the end of the  $k^{th}$  month since the baseline scenario simulation start date (in tonnes C per hectare).

a is the area of the CEA (in hectares).

(2) In projects that have opted to undertake biomass surveys, the carbon stock in included carbon pools in the baseline scenario in an avoided forest re-clearing CEA must be calculated as the average carbon stock in the baseline scenario simulation for the CEA (determined in accordance with Part 5, Division 2) multiplied by the biomass adjustment factor for the CEA (determined in accordance with Schedule 2), and must be calculated using the following equation.

$$C_{baseline} = \frac{\sum_{k=1}^{1200} (C_{t,k} + C_{d,k}) \times BAF \times a}{1200}$$
 Equation 11

#### Where:

C<sub>baseline</sub> is the carbon stock in eligible carbon pools in the baseline scenario in the avoided forest re-clearing CEA (in tonnes of carbon (C)).

 $C_{t,k}$  is the carbon stock in trees in the CEA determined using FullCAM at the end of the  $k^{th}$  month since the baseline scenario simulation start date (in tonnes C per hectare).

 $C_{d,k}$  is the carbon stock in debris in the CEA determined using FullCAM at the end of the  $k^{th}$  month since the baseline scenario simulation start date (in tonnes C per hectare).

BAF is the biomass adjustment factor for the CEA determined in accordance with Schedule 2.

a is the area of the CEA (in hectares).

### 61 Calculating carbon stock in project scenario

(1) In projects that have not opted to undertake biomass surveys, the carbon stock for an avoided forest re-clearing CEA in the project scenario at the end of the reporting period must be calculated as the sum of FullCAM outputs for carbon in the tree and debris pools in the project scenario simulation for the CEA (determined in accordance with Part 5, Division 2) and must be calculated using the following equation.

$$C_{end} = (C_t + C_d) \times a$$
 Equation 12

where:

 $C_{\text{end}}$  is the carbon stock in eligible carbon pools in the project scenario in the avoided forest re-clearing CEA at the end of the reporting period (in tonnes of carbon (C)).

C<sub>t</sub> is the carbon stock in trees in the CEA determined using FullCAM for the final month of the reporting period (in tonnes C per hectare).

 $C_d$  is the carbon stock in debris for the CEA determined using FullCAM for the final month of the reporting period (in tonnes C per hectare).

- a is the area of the CEA (in hectares).
- (2) In projects that have opted to undertake biomass surveys, the carbon stock for an avoided forest re-clearing CEA in the project scenario at the end of the reporting period must be calculated as the sum of FullCAM outputs for carbon in the tree and debris pools in the project scenario simulation for the CEA (determined in accordance with Part 5, Division 2) multiplied by the biomass adjustment factor for the CEA (determined in accordance with Schedule 2), and must be calculated using the following equation.

$$C_{end} = (C_t + C_d) \times BAF \times a$$
 Equation 13

where:

C<sub>end</sub> is the carbon stock in eligible carbon pools in the project scenario in the avoided forest re-clearing CEA at the end of the reporting period (in tonnes of carbon (C)).

 $C_t$  is the carbon stock in trees in the CEA determined using FullCAM for the final month of the reporting period (in tonnes C per hectare).

C<sub>d</sub> is the carbon stock in debris for the CEA determined using FullCAM for the final month of the reporting period (in tonnes C per hectare).

BAF is the biomass adjustment factor for the CEA determined in accordance with Schedule 2.

a is the area of the CEA (in hectares).

# Subdivision 3.4— Abatement from avoided sub-forest re-clearing CEA

### 62 Abatement from avoided sub-forest re-clearing CEA, first reporting period

The abatement for an avoided sub-forest re-clearing CEA for the first reporting period must be calculated using the following equation.

$$ASR = (C_{end} - C_{baseline}) \times \frac{44}{12}$$
 Equation 14

Where:

ASR is the abatement from the avoided sub-forest re-clearing CEA for the reporting period (in tonnes CO<sub>2</sub>-e).

C<sub>end</sub> is the carbon stock in eligible carbon pools in the project scenario in the CEA at the end of the reporting period (in tonnes of carbon (C)), calculated in accordance with section 65.

C<sub>baseline</sub> is the carbon stock in eligible carbon pools in the baseline scenario in the CEA (in tonnes of carbon (C)), calculated in accordance with section 64.

# 63 Abatement from avoided sub-forest re-clearing CEA, subsequent reporting periods

The abatement for an avoided sub-forest re-clearing CEA for subsequent reporting periods must be calculated using the following equation.

$$ASR = ((C_{end} - C_{prev}) \times \frac{44}{12})$$
 Equation 15

Where:

ASR is the abatement from the avoided sub-forest re-clearing CEA for the reporting period (in tonnes CO<sub>2</sub>-e).

C<sub>end</sub> is the carbon stock in eligible carbon pools in the project scenario in the CEA at the end of the reporting period (in tonnes of carbon (C)), calculated in accordance with section 65.

C<sub>prev</sub> is the carbon stock in eligible carbon pools in the project scenario in the CEA at the end of the previous reporting period (in tonnes of carbon (C)), calculated in accordance with section 65.

#### 64 Calculating carbon stock in baseline scenario

(1) In projects that have not opted to undertake biomass surveys, the carbon stock in included carbon pools in the baseline scenario in an avoided sub-forest reclearing CEA must be calculated as the average carbon stock in the baseline scenario simulation for the CEA (determined in accordance with Part 5, Division 2) and must be calculated using the following equation.

$$C_{baseline} = \frac{\sum_{k=1}^{1200} (C_{t,k} + C_{d,k}) \times a}{1200}$$
 Equation 16

Where:

C<sub>baseline</sub> is the carbon stock in eligible carbon pools in the baseline scenario in the avoided sub-forest re-clearing CEA (in tonnes of carbon (C)).

 $C_{t,k}$  is the carbon stock in trees in the CEA determined using FullCAM at the end of the  $k^{th}$  month since the baseline scenario simulation start date (in tonnes C per hectare).

 $C_{d,k}$  is the carbon stock in debris in the CEA determined using FullCAM at the end of the  $k^{th}$  month since the baseline scenario simulation start date (in tonnes C per hectare).

a is the area of the CEA (in hectares).

(2) In projects that have opted to undertake biomass surveys, the carbon stock in included carbon pools in the baseline scenario in an avoided sub-forest reclearing CEA must be calculated as the average carbon stock in the baseline scenario simulation for the CEA (determined in accordance with Part 5, Division 2) multiplied by the biomass adjustment factor for the CEA (determined in accordance with Schedule 2), and must be calculated using the following equation.

$$C_{baseline} = \frac{\sum_{k=1}^{1200} (C_{t,k} + C_{d,k}) \times BAF \times a}{1200}$$
 Equation 17

#### Where:

C<sub>baseline</sub> is the carbon stock in eligible carbon pools in the baseline scenario in the avoided sub-forest re-clearing CEA (in tonnes of carbon (C)).

 $C_{t,k}$  is the carbon stock in trees in the CEA determined using FullCAM at the end of the  $k^{th}$  month since the baseline scenario simulation start date (in tonnes C per hectare).

 $C_{d,k}$  is the carbon stock in debris in the CEA determined using FullCAM at the end of the  $k^{th}$  month since the baseline scenario simulation start date (in tonnes C per hectare).

BAF is the biomass adjustment factor for the CEA determined in accordance with Schedule 2.

a is the area of the CEA (in hectares).

### 65 Calculating carbon stock in project scenario

(1) In projects that have not opted to undertake biomass surveys, the carbon stock for an avoided sub-forest re-clearing CEA in the project scenario at the end of the reporting period must be calculated as the sum of FullCAM outputs for carbon in the tree and debris pools in the project scenario simulation for the CEA (determined in accordance with Part 5, Division 2) and must be calculated using the following equation.

$$C_{\text{end}} = (C_t + C_d) \times a$$
 Equation 18

where:

 $C_{end}$  is the carbon stock in eligible carbon pools in the project scenario in the avoided sub-forest re-clearing CEA at the end of the reporting period (in tonnes of carbon (C)).

 $C_t$  is the carbon stock in trees in the CEA determined using FullCAM for the final month of the reporting period (in tonnes C per hectare).

 $C_d$  is the carbon stock in debris for the CEA determined using FullCAM for the final month of the reporting period (in tonnes C per hectare).

- a is the area of the CEA (in hectares).
- (2) In projects that have opted to undertake biomass surveys, the carbon stock for an avoided sub-forest re-clearing CEA in the project scenario at the end of the reporting period must be calculated as the sum of FullCAM outputs for carbon in the tree and debris pools in the project scenario simulation for the CEA (determined in accordance with Part 5, Division 2) multiplied by the biomass adjustment factor for the CEA (determined in accordance with Schedule 2), and must be calculated using the following equation.

$$C_{end} = (C_t + C_d) \times BAF \times a$$
 Equation 19

where:

C<sub>end</sub> is the carbon stock in eligible carbon pools in the project scenario in the avoided forest re-clearing CEA at the end of the reporting period (in tonnes of carbon (C)).

 $C_t$  is the carbon stock in trees in the CEA determined using FullCAM for the final month of the reporting period (in tonnes C per hectare).

C<sub>d</sub> is the carbon stock in debris for the CEA determined using FullCAM for the final month of the reporting period (in tonnes C per hectare).

BAF is the biomass adjustment factor for the CEA determined in accordance with Schedule 2.

a is the area of the CEA (in hectares).

#### **Subdivision 3.5—Emissions from combustion of fossil fuels**

### 66 Calculating emissions from fossil fuel combustion

(1) Emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O (in tonnes CO<sub>2</sub>-e) from the combustion of fossil fuels associated with the conduct of project activities in the CEAs over a reporting period in the project scenario must be calculated using the following equation.

$$EFF_p = \Sigma_f \Sigma_k E_{f,k}$$
 Equation 20

where:

EFF<sub>p</sub> is the emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O (in tonnes CO<sub>2</sub>-e) from the combustion of fossil fuels associated with the conduct of project activities in the CEAs in the reporting period in the project scenario.

f is a fossil fuel that was combusted during the reporting period in relation to the timber harvesting and hauling operations in the project area.

k is a greenhouse gas emitted from the combustion of the fossil fuel, being  $CO_2, \, CH_4$  or  $N_2O.$ 

 $E_{f,k}$  is the emissions of greenhouse gas k (in tonnes  $CO_2$ -e) from the combustion of fuel type f in the reporting period, calculated in accordance with Equation 21.

(2) For subsection (1), the fuel emissions for fuel type f and greenhouse gas k (in tonnes CO<sub>2</sub>-e) in the reporting period is calculated using the following equation.

$$E_{f,k} = \frac{Q_f \times EC_f \times EF_{f,k}}{1000}$$

**Equation 21** 

where:

 $E_{f,k}$  is the emissions of greenhouse gas k (in tonnes  $CO_2$ -e) from the combustion of fuel type f in the reporting period.

Q<sub>f</sub> is the quantity of fuel type f combusted within the reporting period in relation to the timber harvesting and hauling operations in the project area (in kilolitres).

 $EC_f$  is the energy content factor of fuel type f, as prescribed in the NGER Measurement Determination (in gigajoules per kilolitre).

 $F_{f,k}$  is the emission factor for fuel type f and greenhouse gas k, as prescribed in Schedule 1 to the NGER Measurement Determination (in kilograms  $CO_2$ -e per gigajoule).

# Part 6—Monitoring, record-keeping and reporting requirements

# **Division 1—Preliminary**

# 67 Application

For the purposes of subsection 106(3) of the Act, this Part sets out monitoring, record-keeping, reporting and notification requirements for an offsets project to which this determination applies that is an eligible offsets project.

#### 68 Geospatial information requirements

Where this Part requires geospatial information to be created, monitored or reported, a geographic information system that meets the requirements of the CFI Mapping Guidelines must be used in accordance with the CFI Mapping Guidelines to create, monitor or report that information.

# **Division 2—Monitoring requirements**

#### 69 Monitoring requirements

A project proponent must monitor:

- (a) compliance with the eligibility requirements in Part 3;
- (b) crown cover provided by native trees and native forest cover in each CEA to demonstrate compliance with the gateway requirements Part 3, Division 7;

- (c) all management actions that could have a significant impact on carbon stocks in plantings, natural regeneration and native forests in each CEA;
- (d) all disturbance events that could have a significant impact on carbon stocks in plantings, natural regeneration and native forests in each CEA; and
- (e) the presence of weed species that could affect the attainment or maintenance of native forest cover on the land in each CEA.

# **Division 3—Record-keeping requirements**

### 70 Records that must be kept

- (1) A project proponent of a native reforestation project, avoided forest reclearing project, avoided sub-forest re-clearing project or native reforestation and avoided re-clearing project must create and maintain the following records.
  - (a) Details of how the net abatement amount was calculated for the project in accordance with Part 5, including the FullCAM plots, input data and results for each applicable equation.
  - (b) Details of any biomass surveys undertaken in avoided forest reclearing CEAs and avoided sub-forest re-clearing CEAs in accordance with Schedule 2 (if relevant), including all survey data and the data relied on to calculate the biomass adjustment factor.
  - (c) Details of the monitoring undertaken in accordance with section 69, including the results of the monitoring for each CEA.
  - (d) All project plans prepared under Part 3, Division 6.
  - (e) The details required for each CEA under subsections (2), (3) and (4) (as applicable).
- (2) A project proponent must create and maintain the following records for each plantings, natural regeneration or mixed plantings and natural regeneration CEA.
  - (a) Evidence to justify how the CEA was stratified.
  - (b) Evidence of compliance with the requirements in sections 11, 12, 17, 18, 19, 20 and 21 for the CEA.
  - (c) Evidence of compliance with the native reforestation CEA gateway requirements in Part 3, Division 7.
  - (d) Details of all tree species planted in each CEA (where relevant).
  - (e) Details of the number of trees planted in each hectare of each CEA (where relevant).

- (f) Details of the dominant tree species naturally regenerating in each CEA (where relevant).
- (g) An estimate of the number of trees naturally regenerating in each hectare of each CEA (where relevant).
- (h) The assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(4) and 9(5).
- (i) Date-stamped FullCAM output files (.plo file) for the modelling undertaken for the CEA using FullCAM.
- (i) Details of all fires in the CEA, including:
  - (i) the date the fire occurred;
  - (ii) the location of the fire;
  - (iii) the proportion of the CEA affected by the fire; and
  - (iv) the percentage of trees that were killed by the fire.
- (k) Details of how abatement was calculated for the CEA in accordance with Part 5, including the FullCAM plots, input data and results for each applicable equation.
- (3) A project proponent must create and maintain the following records for each avoided forest re-clearing CEA.
  - (a) Evidence to justify how the CEA was stratified.
  - (b) Evidence of compliance with the requirements in sections 11, 13, 23 and 24.
  - (c) Evidence of compliance with the avoided forest re-clearing CEA gateway requirement in Part 3, Division 7.
  - (d) Details of the dominant tree species in the CEA.
  - (e) The assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(6) and 9(7).
  - (f) The assessed cells delineated under subsection 13(3).
  - (g) Date-stamped FullCAM output files (.plo file) for the modelling undertaken for the CEA using FullCAM.
  - (h) Details of how abatement was calculated for the CEA in accordance with Part 5, including the FullCAM plots, input data and results for each applicable equation.
- (4) A project proponent must create and maintain the following records for each avoided sub-forest re-clearing CEA.
  - (a) Evidence to justify how the CEA was stratified.
  - (b) Evidence of compliance with the requirements in sections 11, 14, 26 and 27.

- (c) Evidence of compliance with the avoided sub-forest re-clearing CEA gateway requirements in Part 3, Division 7.
- (d) Details of the dominant tree species in the CEA.
- (e) The assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(6) and 9(7).
- (f) The assessed cells delineated under subsection 14(4).
- (g) Date-stamped FullCAM output files (.plo file) for the modelling undertaken for the CEA using FullCAM.
- (h) Details of how abatement was calculated for the CEA in accordance with Part 5, including the FullCAM plots, input data and results for each applicable equation.
- (5) The project proponent must ensure the following records are available on the internet.
  - (a) The records concerning how the net abatement amount was calculated for each reporting period, including the FullCAM plots, input data and results for each applicable equation.
  - (b) The records concerning the assessment of compliance with the eligibility requirements in Part 3, including the gateway requirements in Part 3, Division 7.
  - (c) The records concerning biomass surveys undertaken in avoided forest re-clearing CEAs and avoided sub-forest re-clearing CEAs in accordance with Schedule 2 (if relevant), including all survey data and the data relied on to calculate the biomass adjustment factor.

# **Division 4—Reporting requirements**

#### 71 Information in offsets reports

- (1) A project proponent must include the following information in an offsets report for the project.
  - (a) The net abatement amount for the reporting period.
  - (b) The carbon stock change in eligible carbon pools for the reporting period.
  - (c) The carbon stock in eligible carbon pools in the baseline scenario.
  - (d) The carbon stock in eligible carbon pools at the end of the previous reporting period (if applicable).
  - (e) The carbon stock in eligible carbon pools at the end of the reporting period.
  - (f) Total emissions due to biomass burning in the reporting period.

- (g) Details of fuel use on project activities in the reporting period, by fuel type (in litres).
- (h) Total emissions from the combustion of fossil fuels used on project activities in the reporting period.
- (i) A digital map of the project area, showing the location of the CEAs and exclusion areas at the end of the reporting period, prepared in accordance with the CFI Mapping Guidelines.
- (j) Details of any changes in the CEAs and exclusion areas (if applicable).
- (k) If, in the circumstances described in paragraph 6(2)(b), a factor or parameter is defined or calculated for a reporting period by reference to an instrument or writing as in force from time to time:
  - (i) the versions of the instrument or writing used for the factor or parameter;
  - (ii) the start and end dates of each use; and
  - (iii) the reasons why it was not possible to define or calculate the factor or parameter by reference to the instrument or writing as in force at the end of the reporting period.
- (2) A project proponent must include the following information on each CEA in the project area in an offsets report for the project.
  - (a) The abatement amount for the reporting period.
  - (b) The carbon stock change in eligible carbon pools for the reporting period.
  - (c) The carbon stock in eligible carbon pools in the baseline scenario.
  - (d) The carbon stock in eligible carbon pools at the end of the previous reporting period (if applicable).
  - (e) The carbon stock in eligible carbon pools at the end of the reporting period.
  - (f) Details of any disturbance events that occurred during the reporting period that could have a significant impact on carbon stocks in plantings, natural regeneration and native forests in each CEA.
  - (g) For native reforestation CEAs, details of all fires in the CEA in the reporting period (if any), including:
    - (i) the date the fire occurred;
    - (ii) the location of the fire;
    - (iii) the proportion of the CEA affected by the fire; and
    - (iv) the percentage of trees that were killed by the fire;

- (h) For native reforestation CEAs, total emissions due to biomass burning in the reporting period.
- (i) Date-stamped FullCAM output files (.plo file) for the modelling undertaken for the CEA using FullCAM.
- (i) For native reforestation CEAs:
  - (i) the reforestation start date;
  - (ii) evidence to justify how the CEA was stratified;
  - (iii) evidence of compliance with the requirements in sections 11, 12, 17, 18, 19, 20 and 21;
  - (iv) evidence of compliance with the native reforestation CEA gateway requirements in Part 3, Division 7 (if applicable);
  - (v) details of all tree species planted within the CEA;
  - (vi) details of the number of trees planted in each hectare of the CEA;
  - (vii) details of the dominant tree species naturally regenerating in the CEA;
  - (viii) details of any weed species in the CEA that could affect the achievement, maintenance or recovery of native forest cover over the land in the CEA (as relevant); and
  - (ix) the assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(4) and 9(5).
- (k) For avoided forest re-clearing CEAs:
  - (i) details of the baseline and project scenario simulations;
  - (ii) evidence to justify how the CEA was stratified;
  - (iii) evidence of compliance with the requirements in sections 11, 13, 23 and 24;
  - (iv) evidence of compliance with the avoided forest re-clearing CEA gateway requirement in Part 3, Division 7;
  - (v) details of the dominant tree species in the CEA;
  - (vi) details of any weed species in the CEA that could affect the maintenance or recovery of native forest cover over the land in the CEA (as relevant);
  - (vii) the assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(6) and 9(7);
  - (viii) the assessed cells delineated under subsection 13(3); and
  - (ix) details of the biomass surveys undertaken in the CEAs in accordance with Schedule 2 (if relevant), including all survey

data and the data relied on to calculate the biomass adjustment factor.

- (1) For avoided sub-forest re-clearing CEAs:
  - (i) details of the baseline and project scenario simulations;
  - (ii) evidence to justify how the CEA was stratified;
  - (iii) evidence of compliance with the requirements in sections 11, 14, 26 and 27;
  - (iv) evidence of compliance with the avoided sub-forest re-clearing CEA gateway requirements in Part 3, Division 7;
  - (v) details of the dominant tree species in the CEA;
  - (vi) details of any weed species in the CEA that could affect the attainment or maintenance of native forest cover over the land in the CEA (as relevant);
  - (vii) the assessed 10m x 10m cells, and 0.2-hectare aggregations of relevant land, delineated under subsections 9(6) and 9(7);
  - (viii) the assessed cells delineated under subsection 14(4); and
    - (ix) details of the biomass surveys undertaken in the CEAs in accordance with Schedule 2 (if relevant), including all survey data and the data relied on to calculate the biomass adjustment factor.
- (m) Details of any changes in the CEA.

# Division 5—Reporting under section 77A of the Act

#### 72 No division of project area

For the purposes of subsection 77A(2) of the Act, the division of the overall project must not result in the division of a project area.

# **Division 6—Notification requirements**

#### 73 Mandatory notifications

- (1) A project proponent must provide written notice to the Regulator of the following events.
  - (a) The completion of an assessment of whether a CEA in the project satisfies the gateway requirements in Part 3, Division 7.
  - (b) A failure to assess whether a CEA in the project satisfies the gateway requirements within the required timeframe specified in Part 3, Division 7.

- (c) A disturbance event that is likely to adversely affect the ability of a CEA to satisfy the gateway requirements in Part 3, Division 7.
- (2) A notice required to be provided under subsection (1) must be provided to the Regulator within 60 days of the occurrence of the relevant event.
- (3) A notice required under subsection (1)(a) must contain details of the outcome of the assessment and the information relied on to conduct the assessment.
- (4) A notice required under subsection (1)(b) must contain an explanation for the failure to conduct the required assessment.
- (5) A notice required under subsection (1)(c) must contain details of the disturbance event, including:
  - (a) the date or time period over which the event occurred;
  - (b) the area affected by the event; and
  - (c) the percentage of trees killed or likely to die as a consequence of the event in each affected CEA.

# Schedule 1—Native reforestation eligible region

For this instrument, land is in the native reforestation eligible region if it is in an IBRA subregion listed in following table.

Note: Eligible regions reflect modified landscapes that have historically experienced widespread clearing of native vegetation.

The IBRA subregions that form part of the native reforestation eligible region

State or Territory	IBRA Subregion Code	IBRA subregion name	IBRA Region Code	IBRA Region Name
ACT	AUA01	Snowy Mountains	AUA	Australian Alps
ACT	SEH14	Bondo	SEH	South Eastern Highlands
ACT	SEH16	Monaro	SEH	South Eastern Highlands
ACT	SEH06	Murrumbateman	SEH	South Eastern Highlands
ACT	SYB14	Jervis	SYB	Sydney Basin
NSW	AUA01	Snowy Mountains	AUA	Australian Alps
NSW	BBS18	Inglewood Sandstones	BBS	Brigalow Belt South
NSW	BBS25	Liverpool Plains	BBS	Brigalow Belt South
NSW	BBS26	Liverpool Range	BBS	Brigalow Belt South
NSW	BBS20	Moonie-Barwon Interfluve	BBS	Brigalow Belt South
NSW	BBS28	Narrandool	BBS	Brigalow Belt South
NSW	BBS21	Northern Basalts	BBS	Brigalow Belt South
NSW	BBS22	Northern Outwash	BBS	Brigalow Belt South
NSW	BBS24	Pilliga	BBS	Brigalow Belt South
NSW	BBS23	Pilliga Outwash	BBS	Brigalow Belt South
NSW	BBS27	Talbragar Valley	BBS	Brigalow Belt South
NSW	COP03	Canbelego Downs	СОР	Cobar Peneplain

Peneplain
Peneplain
g Riverine Plains
ı Lands
y Darling ssion
ewar
ewar
ewar
ewar
England Tablelands

NSW	NET11	Northeast Forest Lands	NET	New England Tablelands
NSW	NET19	Round Mountain	NET	New England Tablelands
NSW	NET10	Severn River Volcanics	NET	New England Tablelands
NSW	NET15	Stanthorpe Plateau	NET	New England Tablelands
NSW	NET12	Tenterfield Plateau	NET	New England Tablelands
NSW	NET17	Tingha Plateau	NET	New England Tablelands
NSW	NET03	Walcha Plateau	NET	New England Tablelands
NSW	NET05	Wongwibinda Plateau	NET	New England Tablelands
NSW	NET13	Yarrowyck- Kentucky Downs	NET	New England Tablelands
NSW	NNC13	Barrington	NNC	NSW North Coast
NSW	NNC08	Carrai Plateau	NNC	NSW North Coast
NSW	NNC02	Cataract	NNC	NSW North Coast
NSW	NNC04	Chaelundi	NNC	NSW North Coast
NSW	NNC06	Coffs Coast and Escarpment	NNC	NSW North Coast
NSW	NNC11	Comboyne Plateau	NNC	NSW North Coast
NSW	NNC03	Dalmorton	NNC	NSW North Coast
NSW	NNC15	Ellerston	NNC	NSW North Coast
NSW	NNC19	Guy Fawkes	NNC	NSW North Coast
NSW	NNC17	Karuah Manning	NNC	NSW North Coast
NSW	NNC09	Macleay Gorges	NNC	NSW North Coast
NSW	NNC07	Macleay Hastings	NNC	NSW North Coast
NSW	NNC12	Mummel Escarpment	NNC	NSW North Coast

NSW	NNC18	Rocky River Gorge	NNC	NSW North Coast
NSW	NNC14	Tomalla	NNC	NSW North Coast
NSW	NNC16	Upper Hunter	NNC	NSW North Coast
NSW	NNC10	Upper Manning	NNC	NSW North Coast
NSW	NNC01	Washpool	NNC	NSW North Coast
NSW	NNC05	Yuraygir	NNC	NSW North Coast
NSW	NSS03	Capertee Valley	NSS	NSW South Western Slopes
NSW	NSS01	Inland Slopes	NSS	NSW South Western Slopes
NSW	NSS02	Lower Slopes	NSS	NSW South Western Slopes
NSW	RIV03	Murray Fans	RIV	Riverina
NSW	RIV06	Murray Scroll Belt	RIV	Riverina
NSW	RIV02	Murrumbidgee	RIV	Riverina
NSW	SEC03	Bateman	SEC	South East Corner
NSW	SEC01	East Gippsland Lowlands	SEC	South East Corner
NSW	SEC02	South East Coastal Ranges	SEC	South East Corner
NSW	SEH11	Bathurst	SEH	South Eastern Highlands
NSW	SEH14	Bondo	SEH	South Eastern Highlands
NSW	SEH07	Bungonia	SEH	South Eastern Highlands
NSW	SEH17	Capertee Uplands	SEH	South Eastern Highlands
NSW	SEH09	Crookwell	SEH	South Eastern Highlands
NSW	SEH13	Hill End	SEH	South Eastern Highlands
NSW	SEH08	Kanangra	SEH	South Eastern Highlands

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NSW	SEH15	Kybeyan-Gourock	SEH	South Eastern Highlands
NSW	SEH16	Monaro	SEH	South Eastern Highlands
NSW	SEH06	Murrumbateman	SEH	South Eastern Highlands
NSW	SEH10	Oberon	SEH	South Eastern Highlands
NSW	SEH12	Orange	SEH	South Eastern Highlands
NSW	SEQ03	Burringbar- Conondale Ranges	SEQ	South Eastern Queensland
NSW	SEQ13	Clarence Lowlands	SEQ	South Eastern Queensland
NSW	SEQ12	Clarence Sandstones	SEQ	South Eastern Queensland
NSW	SEQ10	Scenic Rim	SEQ	South Eastern Queensland
NSW	SEQ04	Sunshine Coast- Gold Coast Lowlands	SEQ	South Eastern Queensland
NSW	SEQ11	Woodenbong	SEQ	South Eastern Queensland
NSW	SYB09	Burragorang	SYB	Sydney Basin
NSW	SYB08	Cumberland	SYB	Sydney Basin
NSW	SYB13	Ettrema	SYB	Sydney Basin
NSW	SYB02	Hunter	SYB	Sydney Basin
NSW	SYB12	Illawarra	SYB	Sydney Basin
NSW	SYB14	Jervis	SYB	Sydney Basin
NSW	SYB01	Kerrabee	SYB	Sydney Basin
NSW	SYB11	Moss Vale	SYB	Sydney Basin
NSW	SYB07	Pittwater	SYB	Sydney Basin
NSW	SYB10	Sydney Cataract	SYB	Sydney Basin
NSW	SYB04	Wollemi	SYB	Sydney Basin
NSW	SYB06	Wyong	SYB	Sydney Basin
NSW	SYB06	Wyong	SYB	

NSW	SYB05	Yengo	SYB	Sydney Basin
QLD	BBN09	Anakie Inlier	BBN	Brigalow Belt North
QLD	BBN10	Basalt Downs	BBN	Brigalow Belt North
QLD	BBN07	Belyando Downs	BBN	Brigalow Belt North
QLD	BBN04	Beucazon Hills	BBN	Brigalow Belt North
QLD	BBN02	Bogie River Hills	BBN	Brigalow Belt North
QLD	BBN11	Isaac-Comet Downs	BBN	Brigalow Belt North
QLD	BBN14	Marlborough Plains	BBN	Brigalow Belt North
QLD	BBN12	Nebo-Connors Ranges	BBN	Brigalow Belt North
QLD	BBN06	Northern Bowen Basin	BBN	Brigalow Belt North
QLD	BBN13	South Drummond Basin	BBN	Brigalow Belt North
QLD	BBN01	Townsville Plains	BBN	Brigalow Belt North
QLD	BBN08	Upper Belyando Floodout	BBN	Brigalow Belt North
QLD	BBS06	Arcadia	BBS	Brigalow Belt South
QLD	BBS08	Banana-Auburn Ranges	BBS	Brigalow Belt South
QLD	BBS13	Barakula	BBS	Brigalow Belt South
QLD	BBS03	Boomer Range	BBS	Brigalow Belt South
QLD	BBS09	Buckland Basalts	BBS	Brigalow Belt South
QLD	BBS05	Callide Creek Downs	BBS	Brigalow Belt South
QLD	BBS10	Carnarvon Ranges	BBS	Brigalow Belt South
QLD	BBS01	Claude River Downs	BBS	Brigalow Belt South
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QLD	BBS07	Dawson River Downs	BBS	Brigalow Belt South
QLD	BBS14	Dulacca Downs	BBS	Brigalow Belt South
QLD	BBS17	Eastern Darling Downs	BBS	Brigalow Belt South
QLD	BBS18	Inglewood Sandstones	BBS	Brigalow Belt South
QLD	BBS20	Moonie-Barwon Interfluve	BBS	Brigalow Belt South
QLD	BBS19	Moonie-Commoron Floodout	BBS	Brigalow Belt South
QLD	BBS04	Mount Morgan Ranges	BBS	Brigalow Belt South
QLD	BBS28	Narrandool	BBS	Brigalow Belt South
QLD	BBS21	Northern Basalts	BBS	Brigalow Belt South
QLD	BBS12	Southern Downs	BBS	Brigalow Belt South
QLD	BBS16	Tara Downs	BBS	Brigalow Belt South
QLD	BBS11	Taroom Downs	BBS	Brigalow Belt South
QLD	BBS15	Weribone High	BBS	Brigalow Belt South
QLD	BBS02	Woorabinda	BBS	Brigalow Belt South
QLD	CMC04	Byfield	CMC	Central Mackay Coast
QLD	CMC03	Clarke-Connors Ranges	CMC	Central Mackay Coast
QLD	CMC06	Debella	CMC	Central Mackay Coast
QLD	CMC05	Manifold	CMC	Central Mackay Coast
QLD	CMC02	Proserpine-Sarina Lowlands	CMC	Central Mackay Coast
QLD	CMC01	Whitsunday	CMC	Central Mackay Coast
QLD	DRP03	Castlereagh-Barwon	DRP	Darling Riverine Plains

QLD	DRP01	Culgoa-Bokhara	DRP	Darling Riverine Plains
QLD	DRP02	Warrambool- Moonie	DRP	Darling Riverine Plains
QLD	DEU04	Jericho	DEU	Desert Uplands
QLD	MGD08	Southern Wooded Downs	MGD	Mitchell Grass Downs
QLD	MUL02	Eastern Mulga Plains	MUL	Mulga Lands
QLD	MUL06	Langlo Plains	MUL	Mulga Lands
QLD	MUL03	Nebine Plains	MUL	Mulga Lands
QLD	MUL04	North Eastern Plains	MUL	Mulga Lands
QLD	MUL01	West Balonne Plains	MUL	Mulga Lands
QLD	NAN01	Nandewar Northern Complex	NAN	Nandewar
QLD	NET15	Stanthorpe Plateau	NET	New England Tablelands
QLD	NET12	Tenterfield Plateau	NET	New England Tablelands
QLD	SEQ05	Brisbane-Barambah Volcanics	SEQ	South Eastern Queensland
QLD	SEQ08	Burnett-Curtis Coastal Lowlands	SEQ	South Eastern Queensland
QLD	SEQ01	Burnett-Curtis Hills and Ranges	SEQ	South Eastern Queensland
QLD	SEQ03	Burringbar- Conondale Ranges	SEQ	South Eastern Queensland
QLD	SEQ09	Great Sandy	SEQ	South Eastern Queensland
QLD	SEQ07	Gympie Block	SEQ	South Eastern Queensland
QLD	SEQ02	Moreton Basin	SEQ	South Eastern Queensland
QLD	SEQ10	Scenic Rim	SEQ	South Eastern Queensland
QLD	SEQ06	South Burnett	SEQ	South Eastern Queensland

QLD	SEQ14	Southern Great Barrier Reef	SEQ	South Eastern Queensland
QLD	SEQ04	Sunshine Coast- Gold Coast Lowlands	SEQ	South Eastern Queensland
QLD	SEQ11	Woodenbong	SEQ	South Eastern Queensland
QLD	WET04	Atherton	WET	Wet Tropics
QLD	WET01	Herbert	WET	Wet Tropics
QLD	WET03	Innisfail	WET	Wet Tropics
QLD	WET02	Tully	WET	Wet Tropics
SA	EYB03	Eyre Hills	EYB	Eyre Yorke Block
SA	EYB05	Eyre Mallee	EYB	Eyre Yorke Block
SA	EYB01	Southern Yorke	EYB	Eyre Yorke Block
SA	EYB02	St Vincent	EYB	Eyre Yorke Block
SA	EYB04	Talia	EYB	Eyre Yorke Block
SA	FLB02	Broughton	FLB	Flinders Lofty Block
SA	FLB01	Mount Lofty Ranges	FLB	Flinders Lofty Block
SA	FLB04	Southern Flinders	FLB	Flinders Lofty Block
SA	KAN02	Fleurieu	KAN	Kanmantoo
SA	KAN01	Kangaroo Island	KAN	Kanmantoo
SA	MDD04	Lowan Mallee	MDD	Murray Darling Depression
SA	MDD03	Murray Lakes and Coorong	MDD	Murray Darling Depression
SA	MDD02	Murray Mallee	MDD	Murray Darling Depression
SA	MDD05	Wimmera	MDD	Murray Darling Depression

SA	NCP01	Bridgewater	NCP	Naracoorte Coastal Plain
SA	NCP02	Glenelg Plain	NCP	Naracoorte Coastal Plain
SA	NCP03	Lucindale	NCP	Naracoorte Coastal Plain
SA	NCP04	Tintinara	NCP	Naracoorte Coastal Plain
SA	RIV06	Murray Scroll Belt	RIV	Riverina
SA	SVP02	Mount Gambier	SVP	Southern Volcanic Plain
TAS	BEL01	Ben Lomond	BEL	Ben Lomond
TAS	FUR02	Flinders	FUR	Furneaux
TAS	KIN01	King	KIN	King
TAS	TNM01	Northern Midlands	TNM	Tasmanian Northern Midlands
TAS	TNS01	Northern Slopes	TNS	Tasmanian Northern Slopes
TAS	TSE01	South East	TSE	Tasmanian South East
VIC	AUA01	Snowy Mountains	AUA	Australian Alps
VIC	AUA02	Victorian Alps	AUA	Australian Alps
VIC	FUR02	Flinders	FUR	Furneaux
VIC	FUR01	Wilsons Promontory	FUR	Furneaux
VIC	MDD04	Lowan Mallee	MDD	Murray Darling Depression
VIC	MDD02	Murray Mallee	MDD	Murray Darling Depression
VIC	MDD05	Wimmera	MDD	Murray Darling Depression
VIC	NCP01	Bridgewater	NCP	Naracoorte Coastal Plain
VIC	NCP02	Glenelg Plain	NCP	Naracoorte Coastal Plain
VIC	NSS01	Inland Slopes	NSS	NSW South Western Slopes

VIC	RIV03	Murray Fans	RIV	Riverina
VIC	RIV06	Murray Scroll Belt	RIV	Riverina
VIC	RIV04	Victorian Riverina	RIV	Riverina
VIC	SCP01	Gippsland Plain	SCP	South East Coastal Plain
VIC	SCP02	Otway Plain	SCP	South East Coastal Plain
VIC	SCP03	Warrnambool Plain	SCP	South East Coastal Plain
VIC	SEC01	East Gippsland Lowlands	SEC	South East Corner
VIC	SEC02	South East Coastal Ranges	SEC	South East Corner
VIC	SEH02	Highlands-Northern Fall	SEH	South Eastern Highlands
VIC	SEH01	Highlands-Southern Fall	SEH	South Eastern Highlands
VIC	SEH15	Kybeyan-Gourock	SEH	South Eastern Highlands
VIC	SEH16	Monaro	SEH	South Eastern Highlands
VIC	SEH03	Otway Ranges	SEH	South Eastern Highlands
VIC	SEH04	Strzelecki Ranges	SEH	South Eastern Highlands
VIC	SVP01	Victorian Volcanic Plain	SVP	Southern Volcanic Plain
VIC	VIM02	Central Victorian Uplands	VIM	Victorian Midlands
VIC	VIM04	Dundas Tablelands	VIM	Victorian Midlands
VIC	VIM01	Goldfields	VIM	Victorian Midlands
VIC	VIM03	Greater Grampians	VIM	Victorian Midlands
WA	AVW02	Katanning	AVW	Avon Wheatbelt
WA	AVW01	Merredin	AVW	Avon Wheatbelt
WA	ESP01	Fitzgerald	ESP	Esperance Plains

WA	ESP02	Recherche	ESP	Esperance Plains
WA	GES01	Geraldton Hills	GES	Geraldton Sandplains
WA	GES02	Lesueur Sandplain	GES	Geraldton Sandplains
WA	JAF01	Northern Jarrah Forest	JAF	Jarrah Forest
WA	JAF02	Southern Jarrah Forest	JAF	Jarrah Forest
WA	MAL01	Eastern Mallee	MAL	Mallee
WA	MAL02	Western Mallee	MAL	Mallee
WA	SWA01	Dandaragan Plateau	SWA	Swan Coastal Plain
WA	SWA02	Perth	SWA	Swan Coastal Plain
WA	WAR01	Warren	WAR	Warren

# Schedule 2—Biomass survey requirements

#### 1 Determination of native forest biomass

- (1) If the project proponent opts to undertake biomass surveys for avoided forest re-clearing CEA and avoided sub-forest re-clearing CEA under section 9(1)(h), a field-based surveys must be undertaken in accordance with the steps prescribed in this Schedule to determine:
  - (a) the biomass stocks in each avoided forest re-clearing CEA and avoided sub-forest re-clearing CEA; and
  - (b) the biomass adjustment factor for each avoided forest re-clearing CEA and avoided sub-forest re-clearing CEA.
- (2) For all avoided forest re-clearing CEAs:
  - (a) an initial biomass survey must be undertaken within 6 months prior to the submission of the first offsets report for the project;
  - (b) a second biomass survey must be undertaken within 6 months of the 7<sup>th</sup> anniversary of the date when the first biomass survey was completed; and
  - (c) a third biomass survey must be undertaken within 6 months of the 7<sup>th</sup> anniversary of the date when the second biomass survey was completed.
- (3) For all avoided sub-forest re-clearing CEAs:
  - an initial biomass survey must be undertaken within 6 months of the date when the CEA is first assessed having attained native forest cover;
  - (b) a second biomass survey must be undertaken within 6 months of the 5<sup>th</sup> anniversary of the date when the first biomass survey was completed; and
  - (c) a third biomass survey must be undertaken within 6 months of the 5<sup>th</sup> anniversary of the date when the second biomass survey was completed.

#### 2 Step 1—Plot design

- (1) A plot design must be selected in accordance with this section.
- (2) Each plot in an avoided forest re-clearing CEA and avoided sub-forest re-clearing CEA must:
  - (a) have a fixed area and shape with a definite spatial boundary;
  - (b) be able to be re-established for auditing purposes; and
  - (c) be circular, square or rectangular; and

- (d) have an area equal to or greater than 0.05 hectares.
- (3) If the plot is circular, the plot waypoint is the centre of the circle and the plot must be established around the waypoint.
- (4) If the plot is square or rectangular, the plot waypoint is the south-west corner of the plot and the plot must be oriented along a north-south axis.
- (5) If the plot is located on a slope greater than 10 degrees, then a correction must be applied to achieve a constant orthogonal area, where the area of the plot can be calculated using perpendicular lines.
- (6) The plot design selected in accordance with this section must be used for each biomass survey.

#### 3 Step 2—Allocation of waypoints and plots

- (1) At least 200 plot points must be assigned to each avoided forest re-clearing CEA and avoided sub-forest re-clearing CEA using a pseudo-random number generator with a defined seed number.
- (2) The plot points assigned under subsection (1) are the waypoints of the plots.
- (3) The waypoints must be established using a GPS device with an accuracy of at least  $\pm 4$  metres.
- (4) A pseudo-random generator with a known seed value must be used to assign a different number to each waypoint.
- (5) The numbers assigned as provided by subsection (3) must be ranked from lowest to highest.
- (6) The lowest ranked waypoint in subsection (5) is plot 1 and the highest ranked is equal to the number of waypoints assigned in subsection (1).
- (7) All the plots ranked from 1 until the number of plots obtained in Step 4.2 in section 5 must be surveyed.
- (8) The area boundary used to delineate plots must be retained to enable the replication of the plot allocation using the defined seed number.
- (9) Attributes for each plot must be assigned, including:
  - (a) the project name [NAME];
  - (b) the CEA number to which points are allocated [CEA\_NUM];
  - (c) the plot point number [PLOT NUM];
  - (d) the X coordinate in decimal degrees [X VALUE];
  - (e) the Y coordinate in decimal degrees [Y\_VALUE]; and
  - (f) the date of allocation points to the CEA [DATE\_REG].

#### 4 Step 3—Pilot survey

- (1) For each CEA, a pilot survey must be undertaken to perform a pre-biomass survey estimate of variance in relation to the area.
- (2) To undertake a pilot survey:
  - (a) at least the first 5 plot points allocated in accordance with section 3 must be surveyed; and
  - (b) a biomass survey must be undertaken in accordance with sections 6 and 7.
- (3) Data collected as part of the pilot survey may be used to determine the biomass of plots as provided by section 8.

### 5 Step 4—Number of plots

(1) To determine the final sample size required to estimate carbon stocks in each CEA, Steps 4.1 and 4.2 in this section must be completed in relation to each area.

Step 4.1—Coefficient of variation of each carbon estimation area

- (2) The data from the pilot survey undertaken in accordance with section 4 must be used when completing Step 4.1.
- (3) The population coefficient of variation within each CEA must be calculated using the following formula:

$$CV_i = \left(\frac{\sigma_{pre,i}}{\bar{x}}\right) \times 100$$
 Equation S1

Where:

 $CV_i$  = coefficient of variation of the pilot sample in CEA i.

 $\sigma_{pre,i}$  = sample standard deviation from pilot data in CEA i (in tonnes of biomass).

 $\overline{X}$  = sample mean from pilot data in carbon estimation area i (tonnes of biomass).

Step 4.2—Number of plots to sample in each CEA

- (4) Carbon stocks for each CEA must be estimated within  $\pm 10\%$  of the true value of the mean at a 90% confidence level.
- (5) The requirement in subsection (4) is referred to as the *targeted precision*.
- (6) The required sample size to achieve the targeted precision in each CEA must be calculated using the following formula:

$$n_i = \frac{\text{CV}_i^2 \times t_{val^2}}{\text{SE}^2} \label{eq:ni}$$
 Equation S2

Where:

 $n_i$  = estimated number of sample plots required to meet the targeted precision i.

 $CV_i^2$  = coefficient of variation in pilot data as calculated in Equation S1 (expressed as a percentage).

 $t_{val^2}$  = two-sided students t-value, at the degree of freedom equal to (n-1) where (n) is the number of plots established in the biomass survey, for a 90% confidence level.

SE = allowable level of sampling error (expressed as a percentage and fixed as 10%).

#### 6 Step 5—Preparation of biomass survey

To ensure accuracy in measurements and to minimise error, for each CEA:

- (a) each tree and shrub species encountered during surveys must be assigned an allometric equation from Table S1 based on typical mature growth form and wood density the explanatory variables required to be surveyed (i.e. stem diameter at either 10 cm or 130 cm above ground level) must be identified for each species; and
- (b) each plot that must be surveyed must be identified; and

Note: These will be the plots identified in Step 2 numbering from plot 1 through to plot  $n_i$ .

(c) a survey protocol that states the requirements and processes of the biomass survey must be developed, including for the checking and calibration of measuring equipment.

Table S1. Allometric equations for tree and shrub species

Allometric group	Criteria	Parameter to be measured in field (cm)	Equation for biomass estimation (kg dry matter)
Shrub	Species with typical mature growth form as shrubs or small trees generally <2 m height and often multistemmed or highly branched, with a relatively small(<7 cm) stem diameter	D10: stem diameter(s) 10 cm above ground level	exp[-3.007 + 2.428 ln(D10)] x 1.128
Multi-stem trees	multistemmed hardwood (angiosperm) trees, including mallees from the genus Eucalyptus, and trees from the genus Acacia	D10	exp[-2.757 + 2.474 ln(D10)] x 1.079
Eucalypts	typically single-stemmed hardwood trees from the genus Eucalyptus and closely related genera of Corymbia and Angophora	D130: stem diameter(s) 130 cm above ground level	exp[-2.016 + 2.375 ln(D130)] x 1.067
Other – high density	Other tree species that typically have single stems and wood density > 0.5 g/cm <sup>3</sup>	D130	exp[-1.693 + 2.220 ln(D130)] x 1.044
Other – low density	Other trees, mainly conifers such as Araucaria and Agathis, that typically have single stems and stem wood density <0.5 g/cm <sup>3</sup>	D130	exp[-2.573 + 2.460 ln(D130)] x 1.018

## 7 Step 6—Measurements within plots

The explanatory variables identified in section 6 must be measured for all trees and shrubs in each plot required to be surveyed under subsection 3(7).

### 8 Step 7—Biomass of plots

(1) The above ground biomass in each surveyed plot must be determined in accordance with Steps 7.1 and 7.2.

Step 7.1—Determination of above-ground biomass by applying allometric equations

(2) The measurements made in the surveyed plots must be converted into above-ground biomass stock estimates for each tree (Q<sub>AGB,p,i,r</sub>) for tree (j) in sample plot (p) in CEA (i) in reporting period (r).

(3) For the purposes of the conversion in subsection (2), the allometric equation obtained in section 6 applicable to the species or group of species to which the tree belongs must be used.

Step 7.2—Determination of above-ground biomass in survey plots

(4) The above-ground biomass stock in survey plot (p) in CEA (i) must be determined using the following formula:

$$Q_{AGB,p,i,r} = \sum_{j} Q_{AGB,j,p,i,r}$$
 Equation S3

Where:

 $Q_{AGB,p,i,r}$  = total above-ground biomass of all trees in sample plot (p) in CEA (i) for reporting period (r) (in tonnes of dry matter).

 $Q_{AGB,j,p,i,r}$  = above-ground biomass of tree (j) in sample plot (p) in CEA (i) for reporting period r (in tonnes of biomass per tree).

j = tree (j) in sample plot (p) in CEA (i) in reporting period (r).

i = CEA i.

p = sample plot p in each CEA i.

r = reporting period r.

#### 9 Step 8—Edge corrections for plots crossing carbon estimation area boundaries

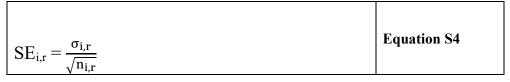
- (1) If a plot crosses the boundary of a CEA, the resulting edge effects must be corrected in accordance with this section.
- (2) If more than 20% of the plot falls outside the CEA that is to be surveyed, the plot must be omitted from the biomass survey.
- (3) If less than 20% of the plot falls outside the CEA that is to be surveyed, the mirage method must be used.
- (4) The effective orthogonal area of plots established using the mirage method must be consistent with the area of all other plots.
- (5) In this section, *mirage method* means the process whereby the area of the plot falling outside of the CEA is established within the CEA that is being surveyed.

### 10 Step 9— Validation of sample size

(1) An ex-post analysis of the data obtained in the biomass survey must be performed to verify that the survey performed in accordance with this Schedule has achieved the targeted precision.

Step 9.1—Standard error

(2) The standard error must be calculated using the following formula:



Where:

 $SE_{i,r}$  = standard error of the biomass survey in CEA i for reporting period r.

 $\sigma_{i,r}$  = standard deviation of the primary biomass survey data in CEA i for reporting period (r) (in tonnes of dry matter).

 $n_{i,r}$  = number of sample plots in CEA (i) for reporting period (r).

i = CEA i.

r = reporting period r.

Step 9.2.—Determination of Targeted Precision

(3) The following formula must be used to determine whether the survey has achieved targeted precision:

$$TP_{i,r} = \frac{SE_{i,r} \times t_{val}}{\overline{Q}_{i,r}}$$
 Equation S5

Where:

 $TP_{i,r}$  = targeted precision error limit of the primary biomass survey for CEA i for reporting period r.

 $SE_{i,r}$  = standard error of the biomass survey in carbon estimation area (i) for reporting period (r).

 $t_{val}$  = two-sided students t-value, at the degree of freedom equal to (n-1) where (n) is the number of plots established in the biomass survey in each carbon estimation area, for a 90% confidence level.

 $\overline{Q}_{i,r}$  = sample mean from biomass survey data in CEA (i) for the reporting period (r) (in tonnes of biomass).

i = CEA i.

r = reporting period r.

- (4) The 90% confidence level must be used when determining the t-value.
- (5) The final value of TP<sub>i,r</sub> must be less than or equal to 10%.
- (6) If TP<sub>i,r</sub> is greater than 10%, additional plots must be surveyed consistently with the requirements of this Subdivision until the targeted precision is less than or equal to 10%.

#### 11 Step 10—Biomass adjustment factor

- (1) A biomass adjustment factor must be calculated for each avoided forest reclearing CEA and avoided sub-forest re-clearing CEA in accordance with this section.
- (2) For an avoided forest re-clearing CEA, the biomass adjustment factor must be calculated as follows.
  - (a) Develop a representative FullCAM model plot for the CEA in accordance with section 45 on the basis the CEA is a natural regeneration CEA.
  - (b) Using the representative FullCAM model plot from (a), model a scenario for 1 hectare in which regeneration is modelled as commencing in the CEA on the day after the land in the CEA was last comprehensively cleared for agriculture. No other events are to be modelled in the scenario, including growth pauses to account for natural disturbances.
  - (c) Calculate the ratio of the biomass survey estimate for aboveground biomass in the CEA (tonnes of dry matter per hectare) to the model output from the scenario from (b) for the mass of aboveground tree components at the end of the month in which the biomass survey was completed.
  - (d) If the ratio from (c) is less than or equal to 1.25, the biomass adjustment factor is that ratio.
  - (e) If the ratio from (c) is greater than 1.25, the biomass adjustment factor is 1.25.
- (3) For an avoided sub-forest re-clearing CEA, the biomass adjustment factor must be calculated as follows.
  - (a) For reporting periods that cover a period before native forest cover was first attained across the entire CEA, the adjustment factor is 1.
  - (b) For reporting periods after native forest cover was first attained across the entire CEA, calculate the biomass adjustment factor in accordance with subsection (2).