

EXPLANATORY STATEMENT

Issued by Authority of the Assistant Minister for Climate Change and Energy, the Hon. Josh Wilson MP

Carbon Credits (Carbon Farming Initiative) Act 2011

Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2024

Legislative Authority

The *Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2024* (the Determination) is made under subsection 106(1) of the *Carbon Credits (Carbon Farming Initiative) Act 2011* (the Act) which gives the Minister the power to make a methodology determination by legislative instrument.

Purpose

The Determination credits increased carbon sequestration through the establishment of new native vegetation and mallee plantings (reforestation projects).

The Determination sets out the criteria for establishing and managing a reforestation project. Additionally, the Determination sets out the process for monitoring, calculating, reporting, and crediting the greenhouse gases abated as a result of a reforestation project; for the purpose of generating Australian carbon credit units (ACCUs).

Background

The Act enables the crediting of greenhouse gas abatement in the land sector. Greenhouse gas abatement is achieved by either reducing or avoiding emissions, or by removing carbon from the atmosphere and storing it in soil or trees. Abatement activities are undertaken as offsets projects. The process involved in establishing an offsets project is set out in Part 3 of the Act. An offsets project must be covered by, and undertaken in accordance with, a methodology determination.

The purpose of a methodology determination is to set out the requirements for a project to be an offsets project and establish procedures for estimating abatement (emissions reductions and sequestration) caused by eligible projects, as well as the rules for monitoring, record-keeping, and reporting. Methodology determinations ensure that emissions reductions are genuine, real, and additional to business as usual.

In deciding to make a methodology determination, the Minister must have regard to the advice of the Emissions Reduction Assurance Committee (ERAC). ERAC is an independent expert panel established to advise the Minister on proposals for methodology determinations. The Minister must not make or vary a methodology determination if the ERAC has advised that it does not comply with the offsets integrity standards, which are set out in section 133 of the Act. The Minister must be satisfied that a methodology determination complies with the offsets integrity standards before making it. In deciding whether to make a methodology determination, the Minister must also consider any adverse environmental, economic, or

social impacts likely to arise as a result of projects to which a methodology determination applies.

Offsets projects undertaken in accordance with a methodology determination, and approved by the Regulator, can generate ACCUs which represent greenhouse gas abatement achieved via a project.

Application of the Determination

The Determination establishes detailed rules for implementing and monitoring an offsets project under the ACCU Scheme. The Determination applies to projects which sequester carbon by establishing and maintaining trees in any part of Australia where they have the potential to attain a height of at least two metres, and a crown cover of at least 20%.

Reforestation projects must occur on eligible land – defined as land that must not contain woody biomass or an invasive native scrub species that need to be cleared for planting to occur, other than known weed species required or authorised by law to be cleared. This includes land that has previously been used for certain agricultural purposes (grazing or cropping).

The Determination provides for the calculation of the net abatement of greenhouse gases for a reforestation project during a reporting period by estimating the carbon dioxide stored in the biomass of project trees, litter and fallen dead wood. Any carbon dioxide removed from the atmosphere and stored as carbon within the biomass of project trees, litter and fallen dead wood at the time the reforestation project commences, and emissions of carbon dioxide, methane or nitrous oxide from fossil fuel use and fire events during the reporting period, are then subtracted from a project's abatement.

The Determination is an updated version of the *Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2014* (the old Determination). If they wish, project proponents with existing approved projects under the old Determination may apply to move their project to the Determination under section 128 of the Act provided their project is covered by the Determination.

The rules set out in the Determination have been designed to reflect the requirements of the offsets integrity standards and ensure that emissions reductions are real and additional to business as usual. The offsets integrity standards require that eligible projects result in carbon abatement that is unlikely to occur in the ordinary course of events and is eligible carbon abatement under the Act. In summary, the offsets integrity standards also require that:

- abatement amounts are measurable and capable of being verified;
- the methods used are supported by clear and convincing evidence;
- material emissions, which are a direct consequence of a project, are deducted; and
- estimates, assumptions, or projections used in a methodology determination are conservative.

Project proponents wishing to implement reforestation projects under the Determination must make an application to the Regulator under section 22 or section 128 of the Act. They must also meet the general eligibility requirements for an offsets project set out in subsection 27(4)

of the Act, which include compliance with the requirements set out in the Determination, and meeting the additionality requirements set out in subsection 27(4A) of the Act. The additionality requirements are:

- the newness requirement;
- the regulatory additionality requirement; and
- the government program requirement.

Subsection 27(4A) of the Act provides that a methodology determination may specify requirements in lieu of the newness requirement or the regulatory additionality requirement. To provide more flexibility and meet narrow optimal planting windows, the Determination specifies requirements in lieu of the newness requirement to permit some project activities, such as site preparation and planting, to be undertaken after an application has been submitted to the Regulator. The regulatory additionality requirement as specified in the Act applies to reforestation projects covered by the Determination. The government program requirement is provided for in the *Carbon Credits (Carbon Farming Initiative) Rule 2015* (the Rule).

Documents incorporated by reference

The Determination requires abatement to be calculated using the Full Carbon Accounting Model (FullCAM). FullCAM is the model used to construct Australia's National Greenhouse Gas Inventory for the land sector. The version of FullCAM that is to be used is the version that applies in accordance with the FullCAM Guidelines or, if the guidelines do not indicate which version should apply, the latest version of FullCAM.

The Determination sets out requirements for using FullCAM, while more detailed requirements and instructions for the Determination are provided in the FullCAM Guidelines. FullCAM can be viewed on the Department of Climate Change, Energy, the Environment and Water's (the Department) website (<http://www.dcceew.gov.au>), and the FullCAM Guidelines can be viewed on the Clean Energy Regulator's (the Regulator) website (<http://www.cleanenergyregulator.gov.au>).

The incorporation of FullCAM and the FullCAM Guidelines as in force from time to time is authorised by subsection 106(8) of the Act.

Permanence period and discounts

Section 23 of the Act provides that, if a project is a sequestration offsets project, an application to the Regulator under section 22 must include a request that a project be subject to either a 100-year or 25-year permanence period. If the Regulator declares that a project is an eligible offsets project, the Regulator will declare that a project is subject to a 100-year or 25-year permanence period. Once declared, the permanence period is fixed, and it will not be possible for projects to 'move between' permanence periods.

If a project proponent elects a 25-year permanence period, a permanence discount applies in accordance with section 16 of the Act. The permanence discount is 20% of the net abatement number unless another percentage is specified in the Rule. As they are sequestration offsets projects under section 54 of the Act, projects undertaken in accordance with the Determination are subject to a risk of reversal buffer, as provided by section 16 of the Act. The risk of reversal buffer number is 5% unless another percentage is specified in the Rule.

Public consultation

An exposure draft of the Determination was published on the Department's website for public consultation from 13 June to 15 July 2024. Thirty-seven submissions were received. In general, they indicated support for the Determination. In particular, submissions welcomed the ability to commence project activities earlier and the inclusion of more relaxed planting requirements.

Determination details

The Determination is a legislative instrument within the meaning of the *Legislation Act 2003*. The Determination commences on the day after it is registered on the Federal Register of Legislation.

Details of the Determination are set out in **Attachment A**. Numbered sections in this explanatory statement align with the relevant sections of the Determination. The definition of terms highlighted in *bold italics* can be found in section 5 or the applicable sections of the Determination.

For the purposes of subsections 106(4) and (4AA) of the Act, the Minister:

- has had regard to, and agrees with, the advice of the ERAC;
- is satisfied that the Determination complies with the offsets integrity standards; and
- has had regard to any adverse environmental, economic, or social impacts from the carrying out of the kind of projects which the Determination would apply.

For the purposes of subsections 106(4A) and (4B) of the Act:

- a project made in accordance with the Determination would provide for eligible carbon abatement; and
- the Determination complies with all of the offsets integrity standards.

A Statement of Compatibility with Human Rights, prepared in accordance with the *Human Rights (Parliamentary Scrutiny) Act 2011*, is at **Attachment B**.

Details of the Determination

Part 1—Preliminary

Section 1 – Name

Section 1 sets out the full name of the Determination as the *Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2024*.

Section 2 – Commencement

Section 2 provides for the Determination to commence on the day after it is registered on the Federal Register of Legislation.

Section 3 – Authority

Section 3 states that the Determination is made under subsection 106(1) of the *Carbon Credits (Carbon Farming Initiative) Act 2011* (the Act).

Subsection 106(1) of the Act provides that the Minister may, by legislative instrument, make a certain type of determination.

Section 4 – Duration

Under subparagraph 122(1)(b)(i) of the Act, a methodology determination remains in force for the period specified in the Determination.

Section 4 sets out the period that the Determination is in force. The Determination will remain in force between the commencement date (the day following registration on the Federal Register of Legislation) and the day before it would otherwise be repealed in accordance with subsection 50(1) of the *Legislation Act 2003*.

In practice, this means that the Determination will be repealed on 31 March 2035.

Section 5 – Definitions

Section 5 provides definitions for various terms used throughout the Determination. Where a term is not defined in the Determination, it has the same meaning set out in section 5 of the Act.

The definition for the Full Carbon Accounting Model (FullCAM) has been updated in the Determination from the definition used in the old Determination. In the Determination, FullCAM is defined as the version of the Full Carbon Accounting Model, as published on the Department's website, that applies in relation to a reforestation project in accordance with the FullCAM Guidelines; or if the FullCAM Guidelines do not indicate which version applies in relation to a reforestation project, the latest version of the Full Carbon Accounting Model, as published on the Department's website. This means that the FullCAM Guidelines may be used as guidance for using FullCAM for the Determination, as published on the Department's website and as in force from time to time.

The following documents and models, as in force from time to time, are used in the Determination in a manner consistent with subsection 106(8) of the Act:

- CFI Mapping Guidelines available at <http://www.cleanenergyregulator.gov.au>.
- FullCAM available at <http://www.dceew.gov.au>.
- FullCAM Guidelines available at <http://www.cleanenergyregulator.gov.au>.
- NGER Regulations (*National Greenhouse and Energy Reporting Regulations 2008*) available at <http://www.legislation.gov.au>.

Section 6 – Factors and parameters from external sources

Subsection 106(8) of the Act provides that a methodology determination may refer to a matter contained in an instrument or writing as in force at a particular time, or as in force from time to time.

Subsection 6(1) asserts that if certain factors or parameters, from another instrument or writing, are used in a calculation set out in the Determination, the instrument or writing in force at the end of the relevant reporting period is the version that is to be used.

Subsection 6(2) establishes an exception to subsection 6(1), providing it doesn't apply if the Determination specifies otherwise, or it is not possible to utilise the instrument or writing as in force at the end of the relevant reporting period.

Part 2 – Reforestation by environmental or mallee plantings projects

Section 7 – Reforestation by environmental or mallee plantings projects

Section 7 specifies the kind of offsets projects to which the Determination applies to in accordance with paragraphs 27(4)(b) and 106(1)(a) of the Act.

Subsection 7(1) provides the Determination only applies to an offsets project if a project involves the establishment of a permanent planting that could reasonably be expected to result in eligible carbon abatement.

Eligible carbon abatement is defined in the Act as carbon abatement that results from the carrying out of an offsets project and is able to be used to meet Australia's climate change targets under the Kyoto Protocol or the Paris Agreement.

Subsection 7(2) states that projects covered by subsection 7(1) are *reforestation projects*.

Part 3—Project requirements

Division 1—General

Section 8 – Operation of this Part

Section 8 states that Part 3 of the Determination specifies requirements that must be met in order for a reforestation project to be an eligible offsets project, for the purposes of paragraph 106(1)(b) of the Act.

Division 2—Types of plantings

Section 9 – Permanent planting types

Section 9 requires eligible offsets projects under the Determination to include either all mixed-species environmental plantings, all mallee plantings, or a combination of both mixed-species environmental plantings and mallee plantings provided that each planting type is contained to its own carbon estimation area (CEA).

Division 3—Land and location

Section 10 – Land on which project is implemented

Section 10 specifies requirements for the types of eligible land on which projects can be implemented.

Subsection 10(1) requires that eligible projects occur within Australia (excluding external territories) and in an area where FullCAM data exists.

Subsection 10(2) requires reforestation projects to occur on land that does not require woody biomass or an invasive native scrub species to be cleared for planting to commence. The exception to this is where known weed species are required or authorised by law to be cleared on the land on which it is proposed that a project is being undertaken.

Subsection 10(3) further specifies that for land to be eligible land for a reforestation project, a project area must be clear of forest cover (other than known weed species) for at least 5 years before the date of an application under section 22 of the Act in relation to a project.

Subsection 10(4) requires the Regulator to be satisfied that project trees established on the land on which a reforestation project is to be implemented to have the potential to attain forest cover.

Section 11 – Project area

Section 11 requires a project area to be identified in accordance with the CFI Mapping Guidelines.

Division 4—Stratification of project area

Section 12 – Initial stratification of project area

Section 12 establishes a requirement that each project area be stratified in accordance with Division 4 prior to the submission of a first offsets report for a project.

Stratification can commence at any time after a section 22 application – provided it is completed and reported on in the first offset report.

Section 13 – Requirements for carbon estimation areas

Section 13 sets out the various requirements for the CEAs of a reforestation project.

Subsection 13(1) requires each CEA to consist of land on which the reforestation project is implemented in accordance with section 10 of the method and be mapped in accordance with the CFI Mapping Guidelines. This ensures consistency between all reforestation projects under the Determination and for modelling purposes.

Subsection 13(2) requires that each CEA:

- have similar site characteristics in relation to soil type, aspect, and slope;
- to consist of a single area of land or multiple areas of land that are not more than 250 metres apart; and
- contain a ‘model point’ within the boundaries and in a location that is representative of the CEA as a whole.

A model point is defined in the Determination as a static location defined by latitude and longitude coordinates for each CEA for the purpose of estimating carbon stocks using FullCAM.

Section 14 – CEA boundaries

Section 14 establishes the various requirements for establishing the geographic boundaries of a CEA.

Subsection 14(2) requires that CEA boundaries be defined in accordance with the CFI Mapping Guidelines.

Subsection 14(3) establishes requirements for defining CEA boundaries in circumstances where plantings are established in accordance with a narrow or wide linear planting geometry. It requires the CEA boundary to be one metre beyond the outer of stems of the plantings and one metre beyond the outer stems bordering an exclusion area.

Subsection 14(4) establishes requirements for defining CEA boundaries in circumstances where a planting geometry is not consistent with a narrow or wide linear planting geometry. It requires the CEA boundary to be immediately outside the stems of the outermost plants and immediately outside the outer stems bordering an exclusion area.

Subsection 14(5) enables an existing CEA boundary to be used in circumstances where a planting geometry is inconsistent with a narrow or wide linear planting and a CEA boundary was defined in accordance with another methodology determination. It is necessary for an offsets report to have already been submitted and accepted by the Regulator and for the requirements in section 13 and 18 to be met. This provision accommodates for differences that may occur in requirements for defining boundaries in projects transferring from earlier methodology determinations.

Subsection 14(6) requires that, for each offsets report submitted to the Regulator, the boundaries of any CEA described as such in the report must be included in the report.

Section 15 – Maximum permitted CEA width

Section 15 provides that the maximum permitted width for a CEA is the value determined in accordance with sections 21 to 27.

Section 16 – CEA planting requirements

Section 16 establishes planting requirements for each CEA.

Subsection 16(1) requires that each CEA contain either a mixed-species environmental planting or mallee planting. This means that a single CEA cannot contain both a mixed-species environmental planting and a mallee planting. While section 9 of the Determination permits a reforestation project to contain both mixed-species environmental plantings and mallee plantings, this section prohibits both from occurring in the same CEA.

Subsection 16(2) limits a CEA to applying only one calibration in a single reporting period.

Subsection 16(3) requires that each CEA have forest potential at the time of planting and for at least 12 months after the planting date.

Section 17 – Requirements for an exclusion area

Section 17 provides that land in a project area on which permanent plantings are not to be established must be defined and mapped as an exclusion area in accordance with the CFI Mapping Guidelines.

Section 18 – Re-stratification of a CEA

Section 18 establishes the terms and conditions by which a CEA may be re-stratified.

Subsection 18(2) establishes the circumstances in which a CEA must be re-stratified, including when

- the site characteristics are no longer similar;
- the land management regime ceases to be similar;
- parts of a planting within the area fail to achieve forest potential;
- 5% or more of the CEA loses forest cover or fails to achieve forest potential because of a disturbance event;
- a different calibration is to be applied to part of an existing CEA.

Situations described in subsection 18(2) result in a CEA that has non-uniform characteristics that cannot be represented using a single FullCAM simulation to estimate abatement. CEAs must be re-stratified into CEAs with uniform characteristics and history to enable accurate modelling of abatement using FullCAM. This is because part of a CEA may be managed differently from the remainder of the CEA, or a natural disturbance may occur (for example, a fire) which only impacts part of a CEA.

Subsection 18(3) requires the reforestation management plan to be updated as soon as practicable following a CEA being re-stratified, and the new boundaries to be identified in the subsequent offsets report.

Subsection 18(4) enables an exclusion area to be re-stratified as a CEA in circumstances where a reforestation project occurs in the exclusion area.

Division 5—Domain group—planting type and requirements

The note at the beginning of Division 5 highlights that domain group, as defined in section 5, restricts the circumstances in which a particular calibration may be applied and that additional restrictions on the use of some calibrations may arise due to competition from adjacent trees as determined by Division 9.

Section 19 – Mallee plantings

Section 19 defines a mallee planting as a planting that consists of mallee species and specifies that a mallee planting may only use a calibration if using it is consistent with the FullCAM Guidelines.

Section 20 – Mixed-species environmental plantings

Section 20 establishes requirements for a mixed-species environmental planting.

Subsection 20(1) defines a mixed-species environmental planting as a planting that consists of a mixture of trees and shrubs that are native to the local area of the planting, sourced from seeds (within the national distribution of the species and appropriate to the biophysical characteristics of the area of the planting), and are established through planting.

These requirements are essential as locally sourced seed, collected from trees and shrubs growing in similar biophysical conditions, increase the survival potential as they are genetically adapted to exist in the local area.

Subsection 20(2) allows a mixed-species environmental planting to consist of a mixture of trees and shrubs that reflect the structure and composition of the local native vegetation community.

Subsection 20(3) requires that the calibration for a mixed-species environmental planting be used only if using it is consistent with the FullCAM Guidelines.

Subsection 20(4) restricts mixed-species environmental plantings from using a mallee calibration.

Division 6—Domain group—planting geometry and spacing

Section 21 – Narrow linear plantings

Section 21 establishes the criteria for narrow linear plantings.

Paragraph 21(a) defines a narrow linear plantings, for mallee plantings, as a belt plating with a maximum width of two rows, planted from tube-stock or direct seeding (or both), a stocking density of at least 800 stems per hectare and that meets the requirements of section 19.

Paragraph 21(b) defines a narrow linear plantings, for mixed-species environmental, as a planting with a maximum width of two rows, planted from tube-stock or direct seeding (or both) or established randomly using tube-stock or broadcast seeding (or both) (and not established in a mix of rows and random plantings) and that meet the requirements of section 20.

Section 22 – Wide linear plantings

Section 22 establishes the criteria for wide linear plantings.

Paragraph 22(a) defines wide linear plantings, for mallee plantings, as a belt planting with a maximum width of 40 metres, planted from tube-stock or direct seeding (or both), a stocking density of at least 800 stems per hectare, and that meets the requirements of section 19.

Paragraph 22(b) defines wide linear plantings, for mixed-species environmental, as plantings with a maximum width of 40 metres, established in rows using tube-stock or direct seeding (or both) or randomly using tube-stock or broadcast seeding (or both) and that meet the requirements of section 20.

Section 23 – Block planting

Section 23 defines a block planting as a planting that does not meet the definition of a narrow linear planting or a wide linear planting and meets the requirements specified in section 27 and does not consist of a single row.

Section 24 – Mallee plantings—plant spacing

Section 24 establishes plant spacing requirements of narrow and wide linear plantings for a mallee planting.

Subsection 24(2) requires the distance between stems, within a planting and between rows, to be six metres or less.

Subsection 24(3) requires the distance between the stems of the trees in the outermost rows in the planting, to be at least 40 metres from the stems of any adjacent planting in a project area.

Subsection 24(4) requires the planting to not be affected by material competition from adjacent trees – as determined by Division 9.

Division 9 sets out the various ways in which to determine whether a material competition exists between a planting and adjacent trees.

Section 25 – Mixed-species environmental plantings—narrow linear plant spacing.

Section 25 provides for plant spacing requirements for narrow linear plant spacing for mixed-species environmental plantings.

Subsection 25(2) requires the distance between stems within a planting and between rows, to be six metres or less.

Subsection 25(3) requires random plantings to have a distance of 20 metres between the stems of the outermost trees or shrubs on one side of the planting to that of the stems of the outermost trees or shrubs on the other side of the planting. Additionally, it requires other plantings to have a distance of 20 metres between the outermost row on one side of the planting to that of the outermost row on the other side of the planting.

Subsection 25(4) requires that the distance between the stems of trees or shrubs at the outermost edge of the planting be at least 40 metres from the stems of another planting in a project area.

Subsection 25(5) requires the planting to not be affected by material competition from adjacent trees – as determined by Division 9.

Division 9 sets out the various ways in which to determine whether a material competition exists between a planting and adjacent trees.

Section 26 – Mixed-species environmental plantings—wide linear plant spacing.

Section 26 provides for plant spacing requirements of a wide linear planting in a mixed-species environmental planting.

Subsection 26(2) requires the distance between stems within a planting and between rows, to be six metres or less.

Subsection 26(3) requires random plantings to have a distance between 20 and 40 metres between the stems of the outermost trees or shrubs. Additionally, it requires other plantings to a distance between 20 and 40 metres between the outermost rows.

Subsection 26(4) requires the distance between the stems of trees or shrubs at the outermost edge of the planting be at least 40 metres from the stems of another planting in a project area.

Subsection 26(5) requires the planting to not be affected by material competition from adjacent trees – as determined by Division 9.

Division 9 sets out the various ways in which to determine whether a material competition exists between a planting and adjacent trees.

Section 27 – Block planting—plant spacing

Section 27 clarifies any doubt, that the requirement that spacing within and between block plantings be done so in accordance with the CFI Mapping Guidelines.

Division 7—Domain group—stocking density

Section 28 – Tube-stock—default values

Section 28 sets out the default stocking density in circumstances where a CEA is established using tube-stock as 85% of the average number of tube-stock planted per hectare for the CEA for the first five years following the planting date, and less than 500 stems per hectare after five years from the planting date.

Section 29 – Direct seeding—default values

Section 29 sets out default stocking density in circumstances where a CEA is established using direct seeding as less than 500 stems per hectare.

Section 30 – Alternatives to default values

Section 30 allows a project proponent, two years after the planting date, to choose to sample stocking density to ascertain measured values for relevant CEAs in accordance with sections 31 to 40.

If a CEAs stocking density is different to the assumption, project proponents are able to use alternate calibrations in FullCAM when estimating the level of abatement.

Section 31 – Requirements for calibrations

Section 31 establishes the requirements for calibrations when the FullCAM Guidelines require a sample to determine stocking density.

Subsection 31(1) requires the stocking density sampling and estimation techniques set out in Division 7 to be applied.

Subsection 31(2) limits the requirement to estimate the stocking density once over the duration of a crediting period.

Subsection 31(3) requires project proponents to remeasure the stocking density if an event occurs that may change the stocking density in a manner that the requirements of the calibration may no longer be able to be met.

Subsection 31(4) provides that, if the FullCAM Guidelines specify that no sampling is required for a calibration, then for the calibration, a project proponent is not required to undertake the processes set out in section 28 (tube stock) and section 29 (direct seeding) and the evidence requirements in section 32 do not apply.

Section 32 – Evidence of stocking density

Section 32 requires that project proponents demonstrate, to the satisfaction of the Regulator, that a planting in an area meets or exceeds the stocking density requirements for the relevant calibration, in circumstances where a calibration that requires measurement of stocking density is used in a CEA.

Section 33 – Estimating stocking density

Section 33 provides for the process by which project proponents can estimate the stocking density of a reforestation project.

Subsection 33(1) provides stocking density for a CEA to be estimated by counting every tree and shrub and dividing the number by the area of the CEA or by systematic random sampling in accordance with subsection 33(2).

Subsection 33(2) stipulates that, if systematic random sampling is to be used to estimate stocking density, the relevant plot locations be selected in accordance with section 36.

Subsection 33(3) states that the methods specified in subsection 33(1) may be undertaken by on-ground measurements or using date-stamped, geo-references, remotely-sensed imagery.

Subsection 33(4) allows stocking density to be estimated by using on-ground measurements by requiring that plots are established within a CEA at intended plot locations, counting each living tree and shrub, and the stocking density being calculated using the specifications in Division 8.

Subsection 33(5) specifies how trees and shrubs are to be countered if a project proponent wishes to use geo-referenced, remotely-sensed imagery. It establishes requirements for the imagery, how each living tree and shrub in the plot to be counted, and requirements for stocking density for the CEA to be calculated using the calculations specified in Division 8.

Division 8 sets out the various calculations to be used in order to calculate stocking density in a particular reforestation project.

Section 34 – Number of plots and probable limits of error

Section 34 requires a project proponent, who undertakes systematic random sampling in a CEA, to establish and analyse a minimum of 10 plots in each CEA and achieve a target probable limit of error at the $P=0.05$ level of significance.

Section 35 – Determining values for stocking density

Section 35 sets out a method to determine the values for stocking density in circumstances where the probable limit of error for the stocking density at the $P=0.05$ level of significance is equal or less than 10%, greater than 10% and equal to or less than 50%, or greater than 50%.

Section 36 – Establishing a grid overlay

Section 36 provides for the criteria by which a project proponent establishes a grid overlay for a reforestation project in accordance with section 33.

Subsections 36(2) and (3) requires a grid to consist of square cells with at least 10 grid intersects within each CEA being sampled.

Subsection 36(4) requires an anchor point for a grid to be established by adopting an anchor point determined by another CFI methodology determination or by randomly selecting easting and northing coordinates within the coordinates for a project area.

The note accompanying this subsection provides an explanation that a reforestation project may require more than one grid anchor point to be established.

Subsection 36(5) requires that the coordinates referred to in subsection 36(4) to be from the latest version of Map Grid of Australia or any Australian standard that replaces the Map Grid of Australia.

Subsection 36(6) requires that the orientation of one axis of the grid be along an azimuth determined by randomly selecting a whole number angle within the range of zero and 89 degrees, with zero being true north.

Subsection 36(7) requires each grid interest to be assigned a unique identifier.

Subsection 36(8) requires actual plot location to be located within 10 metres of each intended plot location.

Section 37 – Plot shapes—general

Section 37 establishes the criteria for general plot shapes to be used for systematic random sampling.

Subsection 37(1) requires sample plots to be a fixed orthogonal area and at least 0.01 hectares in size.

Subsection 37(2) requires that all plots in a CEA have the same shape.

Subsection 37(3) provides a definition of *orthogonal area* to mean the area in a horizontal plane, not a sloping plane. Any measurements of length (for example, the length of the side of a rectangular plot) must be the horizontal distance, not the slope distance.

Section 38 – Plot shapes—block plantings

Section 38 sets out instructions for plot shapes to be used for systematic random sampling of block plantings.

Subsection 38(1) requires sample plots to be either circular or rectangular if the CEA contains one or more block plantings.

Subsection 38(2) requires circular pilots to be established so that the plot location is defined as the centre of the circular plot, and the circumference is defined as the boundary of the plot.

Subsection 38(3) requires rectangular pilots to be established so that the plot location is consistently located in the same point of the rectangular plot for each rectangular plot used in the CEA.

Subsection 38(4) provides a definition of *relative position* to mean the most north-westerly, north-easterly, south-easterly or south-westerly corner of a rectangular plot.

Section 39 – Plot shapes—linear plantings

Section 39 sets out instructions for plot shapes to be used for systematic random sampling of linear plantings.

Subsection 39(2) requires sample plots to be rectangular for linear plantings.

Subsection 39(3) requires rectangular plots to be established so that the centre line for the plot is perpendicular to the long axis of the planting and pass through the actual plot location.

Subsection 39(4) requires the centre line between the boundaries of the CEA to be used to measure the plot width.

Subsection 39(5) provides that the distance between the two ends of the plot must be determined by dividing the plot area by the plot width and by establishing the lines dividing the two ends of the plot parallel to and equidistant from the centre line.

Section 40 – Plots extending beyond CEA

Section 40 provides instructions for managing sampling plots that extend beyond the boundaries of a CEA.

Subsection 40(1) requires that only trees and shrubs contained within the CEA boundary be counted.

The note accompanying subsection 40(1) provides that, for plots that extend beyond the boundary, only the trees and shrubs within the boundary are counted, but for calculation purposes the area of the plot is to be taken to be the same as for other plots in that CEA.

Subsection 40(2) provides that, if a plot has been established in accordance with another CFI methodology determination, the rules pertaining to the treatment of a plot crossing the boundary of a CEA or equivalent under the CFI methodology determination can be applied to the treatment of a project.

Division 8—Calculating stocking density

Section 41 – Calculating stocking density of a plot

Section 41 sets out Equation 1 to calculate the stocking density of a plot.

Section 42 – Calculating average stocking density

Section 42 sets out Equation 2 to calculate the average stocking density of a CEA.

Section 43 – Calculating margin of error for stocking density

Subsection 43(1) sets out Equation 3 to calculate the margin of error for the average stocking density of a CEA.

Subsection 43(2) sets out Equation 4 to calculate the standard deviation of the average stocking density for plots within a CEA.

Section 44 – Calculating probable limits of error for stocking density

Section 44 sets out Equation 5 to calculate the probable limit of error for the average stocking density of a CEA.

Section 45 – Calculating conservative estimate of stocking density

Section 45 sets out Equation 6 to calculate the conservative estimate of the average stocking density of a CEA.

Division 9—Narrow or wide linear plantings—competition from adjacent trees

Section 46 – Competition from adjacent trees

Subsection 46(1) requires that trees adjacent to a narrow or wide linear planting not result in a material impact on the planting's sequestration. This is important as competition from adjacent trees can negatively impact the growth of trees and shrubs and therefore the sequestration achieved by a planting.

Subsection 46(2) requires project proponents to determine whether adjacent trees are having a material impact on the growth of trees in a narrow or wide linear planting in accordance with Division 9. This can be demonstrated using remote imagery dated no earlier than 3 years prior to the planting date, as explained in the note accompanying this subsection.

Subsection 46(3) provides a definition for *grouped adjacent trees* to mean a group of adjacent trees where all the stems in the group are less than 20 metres apart; and *individual adjacent tree* to mean an adjacent tree that is more than 20 metres from any other adjacent tree. These definitions apply to Division 9 of the Determination.

Section 47 – Determining material competition—individual adjacent trees only

Section 47 establishes that an individual adjacent tree poses a material competition to the planting in circumstances where there is more than one individual adjacent tree and, for a narrow planting, every 150 metres in length of the boundaries parallel to the long axis of the

planting; or for a wide linear planting, every 75 metres in length of the boundaries parallel to the long axis of the planting, subject to the criteria set out in section 48 below

Section 48 – Determining material competition—grouped adjacent trees

Section 48 establishes the criteria whereby if met, grouped adjacent trees pose a material competition to the planting. Material competition occurs when there is a single or multiple occurrences of grouped adjacent trees, or where there is a combination of individual and grouped adjacent trees.

Subsection 48(2) states that the net length of impact of grouped adjacent trees is estimated in accordance with subsections 48(3) to (8).

Subsection 48(3) requires the distance between the outermost terms of each occurrence of grouped adjacent trees to be measured along the long axis of the planting.

Subsection 48(4) requires the length of impact of each clump to be determined by adding 30 metres to the distance determined in subsection 48(3).

Subsection 48(5) assumes that the length of the impact for each occurrence of an individual adjacent tree is 30 metres.

Subsection 48(6) requires the gross length of impact of the adjacent trees be determined by adding the distances specified in subsections 48(4) and 48(5) for all grouped and individual adjacent trees.

Subsection 48(7) requires, for narrow linear plantings where there are adjacent trees on opposite sides and the length of impact of these adjacent trees overlap, the distance of the overlap along the long axis for the planting be measured, halved, and subtracted from the gross length of impact determined in subsection 48(6).

Subsection 48(8) specifies that the net length of impact, for a narrow linear planting, be the length determined in accordance with subsection (6) and, if relevant, subsection (7); and for a wide linear planting, be the length determined in accordance with subsection (6).

Subsection 48(9) states if the net length of impact of adjacent trees are, for a narrow planting, more than 20% of the length of the long axis or, for a wide planting, more than 20% of twice the length of the long axis, then the adjacent trees are taken to cause material competition for the planting.

Division 10—Restricted activities

Section 49 – Harvesting

Section 49 stipulates that biomass not be removed from a CEA unless in accordance with section 50.

Section 50 – Permitted biomass removals

Section 50 provides the criteria by which biomass may be removed from a CEA.

Subsection 50(1) provides the reasons by which biomass may be harvested from a CEA. These reasons are thinning, fire management, in accordance with traditional Indigenous practices or native title rights, to remove up to 10% of fallen timber for personal use, to remove up to 20% of seeds for commercial or personal use, or to remove up to 10% of stems, roots or bark to be used for personal use fencing.

Subsection 50(2) provides an additional requirement that the harvesting of biomass not negatively impact biodiversity, forest cover, forest potential, or abatement estimates.

Section 51 – Grazing

Section 51 states that if grazing occurs in a CEA, it must not affect the achievement of forest cover in the CEA. The Regulator is able to request evidence that demonstrates grazing has not prevented the achievement or maintenance of forest cover and compliance with the requirements for stocking density for the calibration used.

The evidence provided to support paragraph 51(b) is able to include date-stamped, geo-references, or remotely-sensed imagery.

Section 52 – Infill planting

Section 52 establishes the terms and conditions by which infill planting may occur in a CEA. Infill planting can be ecological infill planting or establishment infill planting.

Subsection 52(1) requires any infill plantings to consist of only those species described in a project's reforestation management plan for infill planting in that area.

Subsection 52(2) states that infill planting that is establishment infill planting must not affect the calibration that can be used for the CEA in accordance with the Determination and are not taken to be a planting for the purposes of determining the planting date (unless they are dominant canopy trees or a high-density mallee calibration is used and the plantings are done to satisfy the requirements to use that calibration).

Subsection 52(3) states that infill planting that is ecological infill planting is not be taken to be a planting for the purposes of determining a planting date and must not affect the calibration that is be used for a CEA (unless more than 5% of a CEA comprises ecological infill planting and if an ecological infill planting included a mallee planting, in which case a mixed-species calibration must be used).

Subsection 52(4) provides definitions for *ecological infill planting*, *establishment infill planting*, and *infill planting*.

Division 11–Newness and additionality

Section 53 – Requirement in lieu of newness requirement

Section 53 sets out the requirements for a project proponent to meet in lieu of meeting the newness requirement set out in subparagraph 27(4A)(a)(ii) of the Act. It is a key requirement of the Act that ACCUs only be issued for emissions reductions that are ‘additional’—that is, emissions reductions which would have likely not occurred under normal business conditions, in the absence of the Act.

Subsection 53(1) establishes that the newness requirement for projects under the Determination are that a project has not begun to be implemented, with the exceptions set out in the rest of section 53. This is intended to ensure that the assessment of newness disregards certain activities to provide project proponents with flexibility to commence certain aspects of project implementation prior to project declaration. This is in recognition that it can be challenging to meet optimal planting windows.

Subsection 53(2) allows a reforestation project under the Determination to disregard the preparation of a reforestation management plan before a management action commences.

Subsection 53(3) allows a reforestation project under the Determination to disregard site preparation, planting, and the leasing or purchasing of a tangible asset for the purposes of site preparation planting when undertaken after a section 22 application has been made (and before a declaration has been made) or after a section 29 application has been made (but before the date of the variation of the declaration has been made).

Subsection 53(4) provides definitions for *section 22 application*, *section 27 declaration*, *section 29 application*, and *site preparation*.

Division 12–Reforestation management plan

Section 54 – Requirements for a reforestation management plan

Section 54 sets out the requirements for a reforestation management plan which a project proponent must create and maintain to be compliant with the Determination.

Subsection 54(2) requires that a reforestation management plan accompany an application in relation to a project made under the Act.

Subsection 54(3) provides a definition of *reforestation management plan* as a document required for each area of land that is intended to be established, or has been established as a CEA that includes:

- a list of the species planted, or expected to be planted, in carrying out the reforestation project;
- a description of the suitability of these species for the area in which they are to be, or are, planted, and how they will remain suitable for the duration of the permanence period (including, but not limited to, the resilience of the species to any expected changes in the local climate);
- a description of how each species is, or is intended to be, established;
- all information that demonstrates how any plantings fall into a type of planting described in section 19 or 20;
- in relation to project trees, a description of the species of trees to be planted, the growth characteristics of the species, the anticipated height and crown cover across all project areas when project trees are at maturity and any other information to show compliance with subsection 10(4);
- a description of the species to be used for any infill planting and how the infill planting is established (whether planned, expected or actual);
- planting type, geometry, spacing and expected stem density (whether planned, expected or actual);

- how the reforestation project will be monitored to ensure compliance with Part 3 and the CFI Mapping Guidelines.

Subsection 54(4) defines *relevant application* as an application or request under sections 22, 29 and 128 of the Act.

Section 55 – Updating a reforestation management plan

Subsection 55 requires that, if any information that is required to be included in a reforestation management plan (as per subsection 54(3)) becomes out of date, the reforestation management plan be updated as soon as practicable to ensure the information remains up-to-date and correct.

Part 4—Net abatement amount

Part 4 provides the procedures for calculating a reforestation project’s net abatement amount for a particular reporting period.

The calculations set out in Part 4 need to be conducted using FullCAM results as inputs. A project proponent is required to use FullCAM to model the following two types of scenarios:

- Baseline scenario – to be used to estimate abatement that would have occurred if the reforestation project had not occurred.
- Project scenario – to be used to estimate abatement up to the end of the reporting period.

Only the carbon pools in FullCAM included in the net abatement calculations are able to be accounted for by projects.

Modelling is intended to be conducted separately for each CEA. CEAs are stratified according to planting geometries and species, management activities, and biophysical characteristics. Planting and management scenarios in each CEA must be modelled. Project proponents must account for the emissions associated with fire and project activities.

Part 4 requires project proponents to account for carbon stock changes in trees and debris by taking into account forest growth and disturbances events. Part 4 also requires project proponents to account for carbon stock changes and emissions due to the following activities:

- forest growth;
- natural disturbance (including fire); and
- fossil fuel emissions due to reforestation management.

Division 1-Preliminary

Section 56 – Operation of the Part

Section 56 states that Part 4 contains the methods for working out the net abatement amount for a particular reporting period for a reforestation project that is an eligible offsets project. *Net abatement amount* is defined in section 5.

Section 57 – Net abatement amount

Section 57 states that the net abatement amount is taken to be the change in total carbon stock for all of the CEAs within all project areas when compared to the baseline, less project emissions (for example fuel use).

Section 58 – Gases to be taken into account

Section 58 requires that, when making a calculation under Part 4, a project proponent only take into account the carbon pools and emission sources (as well as their corresponding greenhouse gasses) in accordance with the table set out in Schedule 1 of the Determination.

Section 59 – Baseline for project

Section 59 provides the baseline for a reforestation project in relation to a reporting period as the carbon stock that the CEAs for a project would have had in the absence of a project, if the land use and management had continued as they were during the baseline period for a project.

Subsection 59(2) requires the baseline amount to be zero and prohibit it from being recalculated during a project.

Division 2-FullCAM Modelling

Section 60 – FullCAM modelling

Section 60 requires FullCAM to be used (in accordance with the FullCAM Guidelines) to model carbon stocks, emissions resulting from disturbance events, and the effects of management action, for each CEA.

Section 61– Modelling scenarios in FullCAM

Section 61 requires a project proponent to use FullCAM (in accordance with the FullCAM Guidelines and Division 2 of Part 4) to model project scenarios, as a FullCAM simulation, for each CEA in existence at the end of the reporting period.

The note accompanying subsection 61(2) states that that the FullCAM Guidelines set out how a management action or disturbance event is to be modelled in terms of FullCAM events.

Subsection 61(3) requires that all simulations submitted in an offset report are completed within 90 days of submitting the offset report to the Regulator. This is to ensure that the correct version of FullCAM (and associated input data) is used.

Section 62 – Modelling project scenarios

Section 62 provides that a project simulation for a CEA in a reporting period is a FullCAM simulation that begins on the day before the planting date, ends on the last day of the reporting date and simulates all of the management actions and disturbance events listed in the FullCAM Guidelines at the end of that reporting period.

Division 3-Calculation of carbon stock change

Section 63 – Calculating initial carbon stock for project area

Section 63 specifies how a project proponent is to calculate the initial carbon stock for a project area.

Subsection 63(2) provides that the initial carbon stock for a project area is equal to the initial carbon stock for a project in accordance with Equation 7 if a project area is a project area of an eligible offsets project which the Determination applied at the declaration date of a project, and a project commenced in a project area before that date. For all other project areas, the initial carbon stock for a project area, is zero.

Subsection 63(3) provides Equation 7 to calculate the initial carbon stock for a project area.

Section 64 – Calculating project area carbon stock at end of reporting period

Section 64 provides Equation 8 to calculate the carbon stock for a project area, for each reporting period.

Section 65 – Calculating carbon stock for CEA

Subsection 65(1) provides Equation 9 to calculate the initial carbon stock for a CEA. This is intended to be used at a project's declaration date.

Subsection 65(2) establishes Equation 10 to calculate the carbon stock for a CEA. This is intended to be used for each reporting period.

The outputs of all plot-based modelling in FullCAM are expressed on a per-hectare basis. The summed FullCAM outputs for tree carbon and debris carbon is required to be multiplied by the area of the CEA (less any exclusion zones) to calculate the values for the whole CEA.

Division 4—Calculation of project area emissions

Section 66 – Calculating emissions from biomass burning

Subsection 66(1) sets out Equation 11 to calculate emissions of methane for a project area due to biomass burning in the reporting period.

Subsection 66(2) sets out Equation 12 to calculate emissions of nitrous oxide due to biomass burning in the reporting period for a project area.

Subsection 66(3) sets out Equation 13 to calculate total emissions due to biomass burning for a project area in the reporting period.

Section 67 – Calculating emissions from fuel use

Subsection 67(1) requires that, for each reporting period, emissions from fuel used for a project area to be calculated from the end of the previous reporting period to the last month of the current reporting period, by using raw data or estimates for quantities and types of fuel used, and Equations 14 and 15.

Subsection 67(2) provides Equation 14 to calculate the fuel emissions for each fuel type and each greenhouse gas type (carbon dioxide, nitrous oxide and methane) for the reporting period for a project area. For these calculations, the relevant energy content and emission factors are required to be taken from the National Greenhouse Accounts Factors available on the Department's website.

Subsection 67(3) provides Equation 15 to calculate the total emissions from fuel use in the reporting period for a project area.

Division 5—Calculation of the net abatement amount

Section 68 – Calculating the net abatement amount for a project

Subsection 68(1) requires that the net abatement amount for the reporting period for a reforestation project be equal to the sum of the amount calculated by Equation 16.

Subsection 68(2) provides Equation 16 to calculate the net abatement amount for a project area of a reforestation project.

Subsection 68(3) provides a definition for *previous offsets report* to mean the most recent report for a project area submitted under this or another CFI methodology determination applicable for a reforestation project and for which a certificate of entitlement has been issued.

Part 5—Monitoring, record-keeping and reporting requirements

Division 1—Preliminary

Section 69 – Application

Subsection 106(3) of the Act provides that a methodology determination may require a project proponent of an eligible offsets project to comply with specified reporting requirements (in addition to any requirements specified in the rules made under the Act). Under Part 17 and Part 21 of the Act, a failure to comply with these requirements may constitute a breach of a civil penalty provision, and a financial penalty may be payable. Section 69 specifies that such requirements are set out in Part 5.

Section 70 – Geospatial information requirements

Section 70 specifies that where Part 5 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

Section 71 – Project monitoring

Section 71 establishes the requirements by which a project proponent must monitor a reforestation project under the Determination.

Subsection 71(1) establishes an obligation for a project proponent to monitor a reforestation project to ensure compliance with Part 3 of the Determination and the CFI Mapping Guidelines, collect information to demonstrate compliance with a specific calibration, identify and record management actions, and identify and record disturbance events.

Subsection 71(2) permits a project proponent to use on-ground observation and/or remotely-sensed imagery to meet the requirements in subsection 71(1) and collect information to demonstrate that the requirements for the use of a specific calibration have been met.

Division 3—Record-keeping requirements

Section 72 – Records that must be kept

Section 72 sets out the various types of records that a project proponent must create and maintain.

Division 4—Offsets report requirements

Section 73 – Information in first offsets report

Section 73 sets out the information that is required to be included in the first offsets report for each project area.

The note accompanying the section provides that if an offsets report for the reforestation project under another CFI methodology determination has been submitted, then the first offsets report is taken to have been submitted.

Section 74 – Information in subsequent offsets reports

Section 74 sets out the information that is required to be included in the second (and all subsequent) offsets reports for each project area.

Division 5—Reporting under section 77A of the Act

Section 75 – No division of project area

Subsection 77A(2) of the Act allows a methodology determination to make provision for the division of the overall project. That is, the Act permits proponents to report abatement for only part of a project.

Section 75 prevents project proponents from dividing a reforestation project if doing so results in the division of a project area.

Schedule 1—Gases accounted for in calculations

Schedule 1 includes a table which sets out the various gasses that must be taken into account when making a calculation in accordance with Part 4 of the Determination, as referred to by section 58 of the Determination. The table includes the various carbon pools and emission sources (as well as their corresponding greenhouse gasses).

Statement of Compatibility with Human Rights

Prepared in accordance with Part 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2024

This Legislative Instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in Section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Overview of the Legislative Instrument

The Determination provides the detailed rules for the establishment of a native vegetation permanent planting that could reasonably be expected to result in eligible carbon abatement.

Project proponents wishing to implement the Determination must apply to the Regulator and meet the eligibility requirements set out under the Act. Offsets projects undertaken in accordance with the Determination, and approved by the Regulator, can generate Australian carbon credit units from the sequestration of a project.

Human rights implications

This Legislative Instrument does not engage any of the applicable rights or freedoms.

Conclusion

The Legislative Instrument is compatible with human rights as it does not raise any human rights issues.

The Hon Josh Wilson MP

Assistant Minister for Climate Change and Energy