

REPLACEMENT EXPLANATORY STATEMENT

Issued by the Minister for Climate Change and Energy

Carbon Credits (Carbon Farming Initiative) Act 2011

*Carbon Credits (Carbon Farming Initiative—Tidal Restoration of Blue Carbon Ecosystems)
Methodology Determination 2022*

Purpose

The *Carbon Credits (Carbon Farming Initiative—Tidal Restoration of Blue Carbon Ecosystems) Methodology Determination 2022* (the Determination) enables projects that store carbon in biomass and soils and avoid emissions through the establishment of coastal wetland ecosystems (through eligible project activities) to generate Australian Carbon Credit Units (ACCUs).

The Determination sets out the rules for calculating, crediting and reporting the abatement from undertaking eligible project activities for the purpose of creating ACCUs. It also sets out the rules for eligibility of projects to be credited for carbon sequestration and emissions avoidance, and specific notification and monitoring requirements.

Background to the Emissions Reduction Fund

The *Carbon Credits (Carbon Farming Initiative) Act 2011* (the Act) enables the crediting of greenhouse gas abatement from emissions reduction activities across the economy.

Greenhouse gas abatement is achieved either by reducing or avoiding emissions or by removing carbon dioxide from the atmosphere and storing it in soil, biomass or organic matter.

In 2014, the Australian Parliament passed the *Carbon Farming Initiative Amendment Act 2014*, which established the Emissions Reduction Fund (ERF). Further information on the ERF is available at: <https://www.dcceew.gov.au/climate-change/emissions-reduction/emissions-reduction-fund> or www.cleanenergyregulator.gov.au/ERF.

Emissions reduction 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.

Subsection 106(1) of the Act empowers the Minister to make a methodology determination by legislative instrument. The purpose of a methodology determination is to establish

procedures for estimating abatement (through emissions avoidance or sequestration) from eligible projects and rules for monitoring, record keeping and reporting. These determinations will ensure that emissions reductions are genuine—that they are both 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), an independent expert panel established to advise the Minister on proposals for methodology determinations. The Minister must not make or vary a methodology if the ERAC has advised that the instrument or variation to be made would not comply with the offsets integrity standards, which are set out in section 133 of the Act. 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 Clean Energy Regulator (the Regulator) can generate ACCUs that represent greenhouse gas abatement achieved by the project.

Background to the Determination

In December 2020, a blue carbon methodology determination was announced as one of 5 priority ERF methods to be developed in 2021.

This is the first blue carbon methodology determination under the Emissions Reduction Fund. The activity covered by this Determination is the introduction of tidal flow to allow the establishment of coastal wetland ecosystems, including supratidal forests, saltmarshes, mangroves, and seagrass through, principally, the removal or modification of a tidal restriction mechanism.

The Determination sets out the rules for calculating, reporting and crediting the abatement from undertaking eligible project activities for the purpose of creating ACCUs.

The key features of the Determination are:

- Project proponents must remove or modify one or more tidal restriction mechanisms in order to introduce tidal flow to their project area, and, at their option, use, remove, modify, install or construct additional necessary infrastructure or drainage infrastructure, to manage the subsequent extent of tidal inundation.

- Land is eligible to be included in a tidal restoration project if either:
 - tidal flow has been excluded or impeded from the land by one or more tidal restriction mechanisms for at least the 7 years immediately before the project registration application was submitted, or
 - tidal flow has been excluded from the land due to reasons other than a tidal restriction mechanism for at least the 7 years immediately before the project registration application was submitted, and by carrying out the eligible project activities the land will be inundated during the 25-year crediting period.
- Project proponents are required to undertake hydrological mapping as part of the project registration process to ascertain consent and regulatory approval requirements and potential adverse impacts.
- Project proponents must not conduct prohibited activities and must conduct restricted activities only in accordance with the Determination
- Project proponents can estimate carbon abatement at intervals of 6 months to 5 years using a modelled approach via the Blue Carbon Accounting Model. No sampling is required under the Determination
- The Determination applies discounts to account for the risks that carbon sequestered by a tidal restoration project is not maintained, or that the coastal wetland biomass that establishes as a result of the project migrates outside of the project area over time.

Legislative authority for making the Determination

The Determination is made under subsection 106(1) of the Act, which gives the Minister the power to make a methodology determination by legislative instrument.

Application of the Determination

The requirements set out in the Determination were designed to reflect the requirements of the offsets integrity standards and to ensure that credited emissions reductions are real and additional to business as usual. The offsets integrity standards require that the application of the method specified in the Determination to a project that is an eligible offsets project results in carbon abatement that:

- is unlikely to occur in the ordinary course of events; and

- is eligible carbon abatement under the Act.

Additionally, the offsets integrity standards require that:

- carbon abatement amounts are measurable and capable of being verified; and
- the method specified in the Determination to ascertain the amount of greenhouse gas abatement attained by an eligible offsets project, is supported by clear and convincing evidence; and
- material emissions that are a direct consequence of an eligible offsets project are deducted; and
- estimates, assumptions or projections used in the method specified in the Determination should be conservative.

Persons wishing to implement projects under the Determination must make an application to the Regulator under section 22 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 the additionality requirements in subsection 27(4A) of the Act. The additionality requirements are:

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

Documents incorporated by reference

The net abatement amount calculations in Part 4 of the Determination require the use of outputs calculated using the ‘Blue Carbon Accounting Model’ in accordance with the ‘Blue Carbon Accounting Model Guidelines’, as in force from time to time. These documents are referred to as ‘BlueCAM’ and ‘the BlueCAM Guidelines’ in the Determination.

Parts 3, 4 and 5 of the Determination contain requirements that need to be met with reference to BlueCAM and the BlueCAM Guidelines. When the Determination was made, BlueCAM and the BlueCAM guidelines could be viewed on the Regulator’s website (<http://www.cleanenergyregulator.gov.au>).

Parts 3, 4 and 5 also contain requirements that need to be met with reference to ‘The Supplement to the *Carbon Credits (Carbon Farming Initiative—Tidal Restoration of Blue Carbon Ecosystems) Methodology Determination 2022*’ as in force from time to time. This document is referred to as ‘the Supplement’ in the Determination. When the Determination was made, the Supplement could be viewed on the Regulator’s website (<http://www.cleanenergyregulator.gov.au>).

The incorporation of BlueCAM, the BlueCAM guidelines and the Supplement as in force from time to time is authorised by subsection 106(8) of the Act.

For completeness, the National Inventory Report is not incorporated by reference. Although factors have been derived from that document, they have been set out in a manner that does not require reference to the National Inventory Report.

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 the project be subject to either a 100-year or 25-year permanence period. Then, if the Regulator declares that the project is an eligible offsets project, the Regulator will declare that the project is subject to a 100-year or 25-year permanence period. Section 31A of the Act provides that once declared, the permanence period is fixed, and it will not be possible for projects to “move between” permanence periods.

In accordance with section 16 of the Act, a permanence period discount number and a risk of reversal buffer number apply to sequestration offsets projects. For eligible offsets projects that apply the Determination, the permanence period discount number and risk of reversal buffer number are defined as zero by section 9B of the Carbon Credits (Carbon Farming Initiative) Rule 2015.

Instead, the Determination applies a *sequestration buffer* to ensure that discounts are applied only to the sequestration abatement component calculated in tidal restoration projects for which there are reversal risks, and not to the emissions avoidance abatement component. The sequestration buffer applied to tidal restoration projects is provided by subsection 29(4) of the Determination.

If the project is a 25-year permanence period project, the sequestration buffer is 25%.

If the project is a 100-year permanence period project, the sequestration buffer depends on the proportion of land identified as impacted land by the hydrological assessment that is included in the project area:

- If land within all the project areas for the project includes 80-100 per cent of all land identified as impacted land for the project in each current permanence period tidal inundation map for the project, the sequestration buffer is 5%.
- If land within all the project areas for the project includes less than 80 per cent of all land identified as impacted land for the project in each current permanence period tidal inundation map for the project, the sequestration buffer is 25%. This higher discount is intended to manage the risk that the coastal wetland ecosystem vegetation that establishes as a result of the project migrates beyond the project area over time.

Public consultation

The Determination was developed by the Clean Energy Regulator through a co-design process with industry, potential end-users, scientists and technical experts, and the ERAC. The co-design process involved workshops, bilateral stakeholder consultation, and technical review.

An exposure draft of the Determination was published on the website of the Department of Industry, Science, Energy and Resources for public consultation from 13 October 2021 to 10 November 2021. 19 submissions were received. In general, they indicated support for the proposed Determination and in particular its use of the Blue Carbon Abatement Model, as a user-friendly tool to estimate net abatement. Submissions noted the opportunities for projects under the Determination to offer co-benefits, in addition to carbon abatement.

Details of the non-confidential submissions received during public consultation are provided on the Department of Industry, Science, Energy and Resources' website, <https://industry.gov.au>.

Determination details

Details of the Determination are at [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 the Determination.

For the purposes of subsections 106(4), (4A) and (4B) of the Act, in making the Determination the Minister has had regard to, and agrees with, the advice of the ERAC that the Determination complies with the offsets integrity standards and that the Determination should be made. The Minister is satisfied that the carbon abatement used in ascertaining the carbon dioxide equivalent net abatement amount for a project is eligible carbon abatement from the project. The Minister has also had regard to whether any adverse environmental, economic or social impacts are likely to arise from the carrying out of the kind of project to which the Determination applies, and to other relevant considerations.

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

1 Name

Section 1 sets out the full name of the Determination, which is the *Carbon Credits (Carbon Farming Initiative—Tidal Restoration of Blue Carbon Ecosystems) Methodology Determination 2022*.

2 Commencement

Section 2 provides that the Determination commences on the day after it is registered on the Federal Register of Legislation.

3 Authority

Section 3 provides that the Determination is made under subsection 106(1) of the Act.

4 Duration

Section 4 sets out the period during which the Determination is in force.

Under subparagraph 122(1)(b)(i) of the Act, a methodology determination remains in force for the period specified in the Determination. The Determination will remain in force for the duration set out in section 4 unless sooner revoked in accordance with section 123 of the Act or repealed under section 42 of the *Legislation Act 2003*.

Paragraph 4(a) provides that the Determination begins on commencement (as set out in section 2).

Paragraph 4(b) provides that, unless sooner revoked, the Determination ends on the day before it would otherwise be repealed under subsection 50(1) of the *Legislation Act 2003*. Instruments are repealed under that provision on 1 April or 1 October following the tenth anniversary of registration on the Federal Register of Legislation. Paragraph 4(b) ensures that the Determination will expire in accordance with subparagraph 122(1)(b)(i) of the Act.

If the Determination expires in accordance with section 122 of the Act or is revoked under section 123 of the Act during a crediting period for a project to which the Determination applies, the Determination will continue to apply to the project during the remainder of the crediting period under subsections 125(2) and 127(2) of the Act. Project proponents may

apply to the Regulator during a reporting period to have a different methodology determination apply to their projects from the start of that reporting period (see subsection 128(1) of the Act).

5 Definitions

Section 5 defines terms used in the Determination. Generally, where terms are not defined in the Determination, they have the meaning given by section 5 of the Act.

Under section 23 of the *Acts Interpretation Act 1901*, words in a legislative instrument in the singular number include the plural and words in the plural number include the singular.

The following terms used in the Determination are particularly important because they help specify the project requirements in Parts 2 and 3.

The definition of ***aquaculture activities*** informs what activities cannot be conducted under section 12 of the Determination on land that is, or is to be part of, a CEA.

The definition of ***baseline period*** informs the length of time prior to registering a tidal restoration project, or adding an area of land to a project, which is relevant for assessing whether the eligible project activities are additional. This period is 7 years before making the application to register a tidal restoration project or add land to the project.

The definition of ***coastal wetland ecosystem*** informs which areas of land are eligible to be included in the abatement calculations for a tidal restoration project.

The definition of ***crediting period tidal inundation map*** informs the mapping requirements for hydrological assessments prepared for tidal restoration projects.

The definitions of ***drainage infrastructure***, ***necessary infrastructure***, and ***tidal restriction mechanism*** inform the eligible project activities under the Determination.

The definition of ***hydrological assessment*** informs the assessment required to be prepared for tidal restoration projects under section 15, which assesses the hydrological consequences of the eligible project activities implemented or to be implemented for the project immediately after the activities are implemented, over the duration of crediting period and over the duration of the permanence period.

The definition of ***project operations and maintenance plan*** informs the plan required to be prepared for tidal restoration projects under section 14, which contains information about the

proposed eligible project activities and the maintenance requirements necessary to ensure the project achieves its intended outcomes and avoids potential adverse impacts.

6 References to factors and parameters from external sources

Section 6 refers to factors or parameters used in calculations that are derived from external sources. Factors or parameters used in this Determination are derived from the National Inventory Report (that contains national greenhouse gas emission estimates and is available on the Department of Industry, Science, Energy and Resources' website), the Supplement, the Blue Carbon Accounting Model (that provides estimates of the carbon pools and emissions sources for each CEA for the end of the baseline period and each reporting period), the National Greenhouse and Energy Reporting Regulations 2008 (NGER Regulations), and the National Greenhouse and Energy Reporting (Measurement) Determination 2008 (NGER Measurement Determination) which is made under subsection 10(3) of the *National Greenhouse and Energy Reporting Act 2007* (NGER Act).

The effect of subsection 6(1) is that if those instruments are amended during a project's reporting period, then the project proponent will be required to use the factor or parameter prescribed in the instrument that is in force at the end of the reporting period.

Paragraph 6(2)(a) provides that subsection 6(1) does not apply if the Determination sets out other requirements.

Paragraph 6(2)(b) provides that subsection 6(1) does not apply where it is not possible to apply retrospectively a factor or parameter in an instrument that is in force at the end of the reporting period. An example of circumstances where this may occur is where the monitoring approach defined in an external source is amended to require additional or different monitoring practices after the reporting period has commenced. In this circumstance it is not possible to undertake monitoring activities retrospectively in accordance with the new requirement.

As provided for by section 10 of the *Acts Interpretation Act 1901* and section 13 of the *Legislation Act 2003*, references to external documents which are legislative instruments (such as the NGER Regulations) are to versions of those instruments as in force from time to time. In circumstances where paragraph 6(2)(b) of the Determination applies, it is expected that project proponents will use the version of instruments in force at the time at which monitoring or other actions were conducted.

Part 2—Tidal restoration projects

7 Tidal restoration projects

The effect of paragraphs 27(4)(b) and 106(1)(a) of the Act is that a project must be covered by a methodology determination, and that the methodology determination must specify the kind of offsets project to which it applies.

Section 7 of the Determination specifies the high-level features of tidal restoration projects that distinguish them from other kinds of offsets projects.

Subsection 7(1) states that the Determination applies to projects that involve tidal introduction over some or all of the project area for the project to support the establishment of coastal wetland ecosystems within the area, within Australia excluding the external territories, through carrying out one or more eligible project activities.

Subsection 7(2) sets out the eligible project activities for the purposes of the Determination.

All tidal restoration projects are required to carry out the eligible project activity set out in paragraph 7(2)(a). The activities set out in paragraph 7(2)(b) apply at the option of the project proponent. Necessary infrastructure applies when, at the option of the project proponent, it is taken into account in the making of maps forming part of any hydrological assessment for the project. Where applicable, these activities must be reflected in one or more project operations and maintenance plans for the project. The effect of these activities is to manage the extent of tidal inundation that may occur as a result of carrying out the project activity set out in paragraph 7(2)(a).

Part 3—Project Requirements

Division 1—General

8 Operation of this Part

Section 8 indicates that Part 3 of the Determination specifies requirements that must be met in order for a tidal restoration project to be an eligible offsets project.

The effect of paragraph 106(1)(b) of the Act is that a methodology determination must set out requirements that must be met for a project to be an eligible offsets project. Under paragraph 27(4)(c) of the Act, the Regulator must not declare that a project is an eligible offsets project unless the Regulator is satisfied that the project meets these requirements. Further, if a tidal restoration project which has been declared as an eligible offsets project fails to meet any of these requirements, then pursuant to item 3 of subsection 32(1) of the *Carbon Credits (Carbon Farming Initiative) Rule 2015* made for the purposes of subsection 35(1) of the Act, the Regulator may revoke the declaration of the project as an eligible offsets project.

9 Eligible land

Section 9 sets out the requirements for land to be considered eligible land. Land that is not eligible land can still be part of a project area but not a carbon estimation area (CEA). There are two scenarios in which land can be considered eligible land, which are set out in paragraphs 9(a) and 9(b)

Paragraph 9(a) sets out that land may be considered eligible land if over the duration of the 7-year baseline period, tidal flows were excluded from or impeded, reduced or restricted on the land by a tidal restriction mechanism, and, by removing the tidal restriction mechanism the land will become impacted land, as evidenced by a current project start tidal inundation map (prepared as part of the hydrological assessment).

Paragraph 9(b) sets out that land may be considered eligible land if over the duration of the 7-year baseline period, tidal flows were excluded from the land for reasons other than the operation of a tidal restriction mechanism, that tidal restriction mechanism was in operation during the baseline period, and, by carrying out the eligible project activities the land will become impacted land over the duration of the 25-year crediting period, as evidenced by either a permanence period tidal inundation map or a crediting period tidal inundation map (prepared as part of the hydrological assessment). This scenario would apply to land that may

not be impacted immediately after the carrying out of eligible project activities but will become impacted land over the duration of the crediting period due to sea level rise.

10 Project area

Section 10 sets out the requirements for determining the boundaries of a project area.

Subsection 10(1) requires that all land identified as impacted land by the project start tidal inundation map (prepared as part of the hydrological assessment) is included in the project area.

Subsection 10(2) requires that the project area must include eligible land.

Subsection 10(3) clarifies that the project area may also include areas of land that are not eligible, provided that these areas of land will not be included in CEAs for the project.

11 Duty to disclose information relating to project to owners and relevant landholders

Section 11 sets out the requirements for project proponents to provide written notices to owners and relevant landholders of land identified by a permanence period tidal inundation map (prepared as part of the hydrological assessment) as land that will be impacted by tidal inundation arising from the eligible project activities (referred to in the Determination as “impacted land”).

Paragraph 11(2)(a) requires that a notice is provided between 35 and 40 days of the commencement of the removal or modification of a tidal restriction mechanism in accordance with paragraph 7(2)(a). This requirement is intended to ensure that relevant landholders are aware of when tidal inundation will take place, and that they are provided with sufficient notice to allow any preparations to be made. Paragraph 11(2)(b) outlines the information required to be included in the notification.

The effect of subsection 11(3) is that for the duration of the permanence period for the project, the project proponent must take reasonable steps to inform themselves of the owners and relevant landholders of all land outside the project area that is identified as future impacted land by the most recent permanence period tidal inundation map prepared or revised for the project.

Subsection 11(4) requires project proponents to provide anyone identified under subsection 11(3) with information about the project.

The intent of subsections 11(3) and 11(4) is to ensure that where there is a change of ownership or operational control of land that is identified as future impacted land, the new owner and relevant landholder is provided with adequate information about the project within a reasonable timeframe.

12 Activities not to be conducted

Section 12 excludes certain activities being carried out between the application for declaration of the project and the end of the permanence obligation period for the project on land that is or is to be part of a CEA. The intention of section 12 is to prevent actions that could adversely impact on the abatement of carbon within CEAs, for example, by impacting coastal wetland vegetation that has established within CEAs.

13 Restricted activities

Activities restricted by this section may only be conducted on land that is, or is to be, part of a CEA in the period commencing on the date of the section 22 application for the project and ending at the end of the permanence obligation period for the project, according to the specified requirements in this section. These restrictions are intended to enable activities that support the establishment of coastal wetland ecosystems, while preventing actions that could adversely impact on the abatement of carbon within CEAs.

Above and below ground biomass may only be removed or thinned if the requirements in 13(2) and 13(3) are respectively met. This is because the removal and thinning of biomass results in the removal or reversal of carbon sequestered in the biomass, thereby reducing the carbon benefit of the project.

Paragraph 13(2)(f) clarifies that above and below ground biomass of coastal wetland vegetation or forest on land that is, or is to be part of a CEA, may be thinned or removed when the harvesting is in accordance with traditional Indigenous practices or native title rights. The percentage thresholds for the thinning and removal of vegetation set out in subsections 13(3) and (4) do not apply to activities undertaken in accordance with traditional Indigenous practices or native title rights.

The effect of subsection 13(3) is that the cumulative amount of above and below ground biomass in a CEA that may be thinned in accordance with paragraphs 2(a), (b) and (c), must not exceed 5% of the total above and below ground biomass in the CEA in a calendar year.

This threshold intends to ensure that any thinning is immaterial in terms of its impact on net abatement.

The effect of subsection 13(4) is that the cumulative amount of above and below ground biomass that may be removed from the CEA in accordance with paragraphs 2(c) and (d), must not exceed 5% of the total above and below ground biomass in the CEA in a calendar year. This threshold intends to ensure that any biomass removals are immaterial in terms of their impact on net abatement.

Subsection 13(5) requires that the planting or seeding of plants or propagules may only be conducted if the planting or seeding satisfies the definition of an environmental coastal wetland planting. This is intended to support the reestablishment of coastal wetland vegetation species and vegetation communities that are typical to the locality of the project area to ensure their survival.

The effect of subsection 13(6) is that boardwalks are only permitted in CEAs where no more than 5% of the total above and below ground biomass in the CEA is removed from the CEA in a calendar year as a result of the construction of boardwalks in that CEA, or the effects of the placement of all boardwalks in the CEA.

Subsection 13(7) provides restrictions for excavation activities within CEAs. Excavation activities that include disturbing, moving, adding or removing sediment may only be conducted in the two circumstances outlined in paragraphs 13(7)(a) and 13(7)(b).

14 Project operations and maintenance plan

Section 14 establishes the requirements for preparing and reviewing project operations and maintenance plans for tidal restoration projects. Project operations and maintenance plans provide an overview of the intended project activities for a tidal restoration project, and any ongoing maintenance required to ensure the intended ongoing function of any tidal restriction mechanisms, necessary infrastructure or drainage infrastructure used by the tidal restoration project, for the duration of the permanence period. Project operations and maintenance plans are also used to inform the preparation of hydrological assessments under section 15. The requirements for what information must be included in project operations and maintenance plans are detailed in the Supplement.

It should be noted that while a project operations and maintenance plan requires ongoing reviews, the work required to revise a plan will be dependent on the extent of any changes

that may be required. For example, if the eligible project activities for the project are not changing, then it is likely that a review will not identify any required changes and the project operations and maintenance plan may not require revision.

Subsection 14(1) requires that a project operations and maintenance plan is prepared for a tidal restoration project before an application for declaration of that project as an eligible offsets project is made. The project operations and maintenance plan must be provided to the qualified person who prepares the hydrological assessment for that project to inform their assessment. Where the tidal restoration project will use a tidal restriction mechanism, necessary infrastructure or drainage infrastructure to manage the extent of tidal inundation as part of the eligible project activities, the project operations and maintenance plan (and hydrological assessment) must also be provided to a qualified engineer. The qualified engineer must prepare a confirmation (referred to in the Determination as a *relevant confirmation*) which confirms that the design specifications contained in the project operations and management plan for the project on which the hydrological assessment is based, can reasonably be expected to manage tidal flows in the manner shown in maps forming part of the hydrological assessment.

The effect of subsection 14(2) is that before a project proponent makes an application to vary the project area of a tidal restoration project under section 29 of the CFI Act, the project proponent must either revise or prepare one or more project operations and maintenance plans for the project that reflect the proposed change. This is intended to manage the risk that a change in the project area may result in additional infrastructure or drainage being included in a project area that are not covered by an existing project operations and maintenance plan. The new or revised project operations and maintenance plan must also be provided to a qualified engineer for the purposes of providing a relevant confirmation.

The effect of subsection 14(3) is that before a project proponent makes a change to any of the eligible project activities for the project, for example, modifying infrastructure to facilitate an increase in tidal flows to an area of the project, the project proponent must either revise or prepare one or more project operations and maintenance plans for the project that reflect the proposed change. This is intended to manage the risk that a change in eligible project activities may change the maintenance required to ensure that any tidal restriction mechanisms, necessary infrastructure or drainage infrastructure being used by a project to

manage tidal flows, will continue to operate in a way that supports the intended outcomes of the project.

If the proposed change involves a change to the way a tidal restriction mechanism, necessary infrastructure or drainage infrastructure will be used by the project to manage tidal flows, the new or revised project operations and maintenance plan must also be provided to a qualified engineer for providing a relevant confirmation.

Subsection 14(4) places obligations on the project proponent and each relevant landholder of land on which the eligible project activities for the project are to be carried out, in relation to the project operations and maintenance plan. They are required to provide a signed statement that they have read each of the project operations and maintenance plans and agree to implement or oversee implementation of each project operations and maintenance plan. In the case that the project proponent and the relevant landholder are the same person, then they will only need to sign a current or revised project operations and maintenance plan once.

Each project operations and maintenance plan must be reviewed and if necessary revised, as required by subsection 14(5). The project proponent is to review, and if necessary, revise, each project operations and maintenance plan at least every 5 years until the end of the crediting period. After the end of the crediting period, the project operations and maintenance plan must be reviewed, and if necessary revised, at least every 10 years until the end of the permanence obligation period for the project.

Paragraph 14(5)(c) requires project proponents review, and if necessary, revise, project operations and maintenance plans within 30 days of becoming aware of the circumstances described in subparagraphs 14(5)(c)(i), (ii), and (iii).

Subsection 14(6) requires that if revisions are made to the project operations and maintenance plan for the project for reasons set out in subsection 14(5), the new or revised project operations and maintenance plan must be provided to a qualified person for the purposes of reviewing or preparing a hydrological assessment for that project which reflects the proposed change.

If the revisions made to the plan relate to the way a tidal restriction mechanism, necessary infrastructure or drainage infrastructure will be used by the project to manage tidal flows, the new or revised project operations and maintenance plan must also be provided to a qualified engineer for providing a relevant confirmation.

Subsection 14(7) clarifies that where a project operations and maintenance plan has been revised in accordance with paragraph 14(5)(c), it must be provided to the Regulator within 9 months.

15 Hydrological assessment

Section 15 establishes the requirements for preparing and reviewing hydrological assessments for tidal restoration projects. Hydrological assessments are intended to document the projected tidal inundation that will occur as a result of carrying out a tidal restoration project, taking into account projected sea level rise, site elevation of the project area and the project operations and maintenance plan prepared for the project. The maps included in a hydrological assessment assess the hydrological consequences of the eligible project activities implemented by a project over a series of different time scales; immediately following the project activities (to inform which areas of land must be included in the project area and consent requirements), over the duration of the 25-year crediting period (to identify which areas of land meet the eligible land requirements set out in section 9 of the Determination) and over the duration of the 25- or 100-year permanence period for the project (to inform consent requirements and the application of the sequestration buffer). These maps are referred to in the Determination as the *project start tidal inundation map*, the *crediting period tidal inundation map* and the *permanence period tidal inundation map*.

The requirements for what information must be included in hydrological assessments are detailed in the Supplement.

While a hydrological assessment may require ongoing reviews, the work required to revise an assessment will be dependent on the extent of any changes that may be required. For example, if the eligible project activities for the project are not changing, then it is likely that a review will not identify any required changes and the hydrological assessment may not require revision.

Subsection 15(1) requires that an initial hydrological assessment is prepared for a tidal restoration project before an application for declaration of that project as an eligible offsets project is made that takes into account the information about the eligible project activities contained in the project operations and maintenance plan prepared for the project under subsection 14(1), is supported by a relevant confirmation (where required) and meets the requirements of subsection 15(6).

Subsection 15(2) specifies requirements for when an application to vary a project area is made. Where this occurs, one or more hydrological assessments must be revised to cover the varied area, or one or more hydrological assessments must be prepared to cover the varied project area. This must occur before the section 29 application is submitted to vary the project area. The new or revised hydrological assessment must meet the requirements of subsection (7) and where necessary, must be supported by a relevant confirmation.

The effect of subsection 15(3) is that before a project proponent makes a change to any of the eligible project activities for the project, for example, modifying infrastructure to facilitate an increase in tidal flows to an area of the project, the project proponent must revise or prepare one or more hydrological assessments for the project that reflects the projected changes in tidal flows as a result of the change in the eligible project activities, and the project operations and maintenance plan that has been revised or prepared by the project proponent under subsection 14(3). The new or revised hydrological assessment must be prepared or reviewed by a qualified person, meet any requirements in the Supplement and where necessary, be supported by a relevant confirmation.

Subsection 15(4) requires that where a project operations and maintenance plan for a project has been revised under subsection 14(5), one or more hydrological assessments for that project must be revised or one or more new hydrological assessments must be prepared within 30 days, that take into account the revisions made to the project operations and maintenance plan and the information contained in that plan. The new or revised hydrological assessments must be prepared or reviewed by a qualified person and meet any requirements in the Supplement. The new or revised hydrological assessments must be prepared or reviewed by a qualified person, meet any requirements in the Supplement and where necessary, also be supported by a relevant confirmation.

Subsection 15(5) requires that where a project proponent becomes aware that an existing hydrological assessment for their project contains a material error that may relate to the introduction, increase, reduction, modification or exclusion of tidal flows over any land, the hydrological assessment must be revised in a way that accounts for the error within 30 days. The revised hydrological assessment must be prepared or reviewed by a qualified person and meet any requirements in the Supplement where necessary, must be supported by a relevant confirmation.

Subsection 15(8) requires that a project proponent submit a copy of a hydrological assessment for the project to the Regulator within 9 months of revising or preparing the hydrological assessment under subsections (4) or (5).

16 Project extent mapping

Section 16 establishes the requirements for preparing project extent maps for tidal restoration projects. Project extent mapping is intended to identify key features of any area of land that will be impacted as a result of the carrying out a tidal restoration project over the duration of the permanence period. The requirements for what information must be included in project extent maps are detailed in the Supplement.

While a project extent map may require ongoing reviews, the work required to revise a project extent map will be dependent on the extent of any changes that may be required. For example, if the eligible project activities for the project are not changing, then it is likely that a review will not identify any required changes and the project extent map may not require revision.

Subsection 16(1) requires that an initial project extent map is prepared for a tidal restoration project before an application for declaration of that project as an eligible offsets project is made. The map must cover all land identified as impacted land for the project by the hydrological assessment prepared for that project.

Subsection 16(2) specifies requirements for when a project area is to be varied. Where this occurs, one or more project extent maps must be revised to cover the varied area, or one or more project extent maps must be prepared to cover the varied project area. This must occur before the section 29 application is submitted to vary the project area.

Subsection 16(3) requires that if a hydrological assessment for a project is prepared or revised in accordance with subsections 15(3), (4) or (5), the project proponent must either revise one or more existing project extent maps or prepare one or more new project extent maps within 30 days.

Subsection 16(4) requires that if a project proponent becomes aware that an existing project extent map contains a material error, within 30 days of becoming aware of the error the project proponent must revise the project extent map to account for that error.

17 Acid sulfate soils management plan

Section 17 establishes the requirements for preparing acid sulfate soils management plans for tidal restoration projects, if such plans are required by an applicable law or recommended by a relevant body or agency. Land with acid sulfate soils must be identified as part of the project extent mapping for a tidal restoration project. Where disturbance of acid sulfate soils may occur as a result of the eligible project activities being carried out, project proponents are required to prepare an acid sulfate soils management plan. Acid sulfate soil management plans are required to outline the actions required to be undertaken in order to manage any risks arising due to the disturbance of land containing acid sulfate soils and must be prepared in accordance with any applicable State, Territory or Commonwealth laws and take into consideration any applicable guidance provided by any State, Territory or Commonwealth government body or agency or local government authority.

While an acid sulfate soils management plan may require ongoing reviews, the work required to revise a plan will be dependent on the extent of any changes that may be required. For example, if the eligible project activities for the project are not changing, then it is likely that a review will not identify any required changes and the acid sulfate soils management plan may not require revision.

Subsection 17(1) requires that where project extent mapping for a tidal restoration project has identified acid sulfate soils that may be disturbed by any eligible project activities, an acid sulfate soils management plan is prepared for a tidal restoration project before an application for that project to be declared as an eligible offsets project is made.

Subsection 17(2) requires that before an application to vary the project area of a tidal restoration project is made, the project proponent must revise or prepare one or more acid sulfate soils management plans to ensure that all land in the project area containing acid sulfate soils which may be disturbed as a result of the project activities is covered by an acid sulfate soils management plan.

Subsection 17(3) requires that where a project extent map for a tidal restoration project is prepared or revised under subsections 16(3) or (4), the project proponent must revise or prepare one or more acid sulfate soils management plans within 30 days. This ensures that all

land in the project area containing acid sulfate soils which may be disturbed as a result of the project activities is covered by an acid sulfate soils management plan.

Subsection 17(4) requires that where a project proponent becomes aware that an existing acid sulfate soils management plan for their project contains a material error, within 30 days of the project proponent becoming aware of the error the acid sulfate soils management plan must be revised in a way that accounts for the error.

Subsection 17(5) requires that acid sulfate soil management plans are prepared and revised in accordance with any applicable State, Territory or Commonwealth laws, and that they take into consideration any applicable State, Territory, Commonwealth or local government guidance in relation to acid sulfate soils management plans.

Subsection 17(6) places obligations on the project proponent and each relevant landholder of land containing acid sulfate soils as identified in the project extent map, for the duration of the permanence period. They are required to provide a signed statement that they have read each of the acid sulfate soils management plans to be carried out on the land, and agree to implement or oversee the implementation of those plans, in accordance with any applicable State, Territory or Commonwealth laws, and after having taken into consideration any applicable State, Territory, Commonwealth or local government guidance in relation to acid sulfate soils management plans.

Each acid sulfate soils management plan must be reviewed and if necessary revised, as required by subsection 17(7). The project proponent is to review, and if necessary, revise, each acid sulfate soils management plan at least every 5 years until the end of the crediting period. After the end of the crediting period, the acid sulfate soils management plan must be reviewed, and if necessary revised, at least every 10 years until the end of the permanence obligation period for the project.

Subparagraph 17(7)(c)(iii) requires that where a project proponent becomes aware that the disturbance to acid sulfate soils has changed materially from what was envisaged in a current acid sulfate soils management plan for that project, the project proponent must review, and if necessary, revise, each acid sulfate soils management plan for that project.

18 Mosquito management plan

Section 18 establishes the requirements for preparing a mosquito management plans for tidal restoration projects, if such plans are required by an applicable law or recommended by a relevant body or agency. Project proponents are required to prepare a mosquito management plan for all land within the project area of the project. Mosquito management plans are required to outline the actions required to be undertaken in order to manage any risks arising due to the presence of mosquito hazard. Mosquito management plans are intended to manage potential adverse impacts (for example, public health impacts) that may arise as a result of a tidal restoration project.

Subsection 18(1) requires that a mosquito management plan is prepared for all the land types within a project area of the tidal restoration project before an application for the declaration of that project as an eligible offsets project is made.

Subsection 18(2) requires that before an application to vary the project area of a tidal restoration project is made, the project proponent must revise or prepare one or more mosquito management plans to ensure that all land in the project is covered by a mosquito management plan.

Subsection 18(3) requires that where a project proponent becomes aware that an existing mosquito management plan contains a material error, within 30 days of the project proponent becoming aware of the error the mosquito management plan must be revised in a way that accounts for the error.

Subsection 18(4) requires that mosquito management plans are prepared and revised in accordance with any applicable State, Territory or Commonwealth laws, and that they take into consideration any applicable State, Territory or Commonwealth guidance in relation to mosquito management plans.

Subsection 18(5) places obligations on the project proponent and each relevant landholder of the land within a project area, for the duration of the permanence period. They are required to provide a signed statement that they have read each of the mosquito management plans to be carried out on the land, and agree to implement or oversee the implementation of each current mosquito management plan, in accordance with any applicable State, Territory or Commonwealth laws, and after having taken into consideration any applicable State,

Territory, Commonwealth or local government guidance in relation to mosquito management plans.

Each mosquito management plan must be reviewed, and if necessary revised, according to subsection 18(6). The project proponent must review, and if necessary, revise, each mosquito management plan at least once every 5 years until the end of the crediting period of the project. After the end of the crediting period, the mosquito management plan must be reviewed, and if necessary revised, at least every 10 years until the end of the permanence obligation period for the project.

Subparagraph 18(6)(c)(iii) requires that where a project proponent becomes aware that the mosquito hazard has changed materially from what was envisaged in a current mosquito management plan for that project, the project proponent must review, and if necessary, revise, each mosquito management plan for that project.

19 Information to be included in applications relating to the project

Section 19 provides that, when applying for declaration as an eligible offsets project under section 22 of the Act, or applying to vary the project area (as provided for under section 29 of the Act), a project proponent must include:

- evidence that eligible land in each project area meets the requirements of section 9;
- a description of the land types within the project area or project areas of the project immediately prior to the date of the application, including any land types that are, in accordance with the BlueCAM guidelines, dominant land types;
- a description of each tidal restriction mechanism which will be the subject of the eligible project activities for the project and when it was first constructed;
- if such evidence has not previously been provided to the Regulator—evidence that each such tidal restriction mechanism was legally installed or constructed under the relevant Commonwealth, State or Territory or local government laws, when first installed or constructed;
- each project operations and maintenance plan, project extent map, acid sulfate soils management plan and mosquito management plan that has been prepared or revised for the project;

- each hydrological assessment that has been prepared or revised for the project together with each relevant confirmation provided by a qualified engineer in support of the hydrological assessment;
- if a current permanence period tidal inundation map for the project made under section 15 identifies any land as impacted land for the project that is not, or is not included in, a project area for the project:
 - consent for the eligible project activities for the project to be undertaken and for the land to become impacted land for the project, given in writing by each person (other than the project proponent for the project) whose agreement in relation to the land would have been required for the project proponent to be the project proponent for the project if the land had been, or had been part of, a project area for the project; and
 - an undertaking signed by each landholder of the land that they will pass on to any potential purchasers of the land details of the project activities that were provided to the landholder in connection with obtaining their consent or in the case where the landholder is the project proponent, the information that is available to them.

The intent of subparagraph 19(g)(i) is to extend the requirement to obtain legal right to any areas that will be impacted by the project area but are not contained within the project area. This recognises that tidal restoration projects may have direct impacts beyond the project area. The intent of subparagraph 19(g)(ii) is to ensure that future landholders who may be impacted are also informed of the project.

20 Information to be included in a section 29 application

Section 20 sets out the requirements for a project proponent to ensure that the applicable eligible interest holder consents are obtained prior to a project area variation application being made.

The effect of subsections 20(1) and 20(2) is that where a 25-year permanence period project makes a section 29 application and a current permanence period tidal inundation map identifies that new areas of land will become impacted land that are outside the project area for the project, the section 29 application must include evidence satisfactory to the Regulator of written consent from all associated impacted eligible interest holders for the eligible

project activities to be carried out and the new areas of land to become impacted land (where consent has not previously been provided).

The effect of subsections 20(3) and 20(4) is that where a 100-year permanence period project makes a section 29 application and a current crediting period tidal inundation map identifies that new areas of land will become impacted land that are outside the project area, the section 29 application must include evidence satisfactory to the Regulator of written consent from all associated impacted eligible interest holders for the eligible project activities to be carried out and the new areas of land to become impacted land (where consent has not previously been provided).

The effect of subsections 20(5) and 20(6) is that where a 100-year permanence period project makes a section 29 application and a current permanence period tidal inundation map identifies that new areas of land will become impacted land that are both outside the project area and not identified in a current crediting period tidal inundation map, the section 29 application must include evidence satisfactory to the Regulator of written consent from all associated impacted eligible interest holders whose interest could extend beyond the end of the crediting period of the project, for the eligible project activities to be carried out and the new areas of land to become impacted land (where consent has not previously been provided).

21 Consent for land not in the project area becoming impacted land

Section 21 sets out the requirements for project proponents to ensure that all applicable eligible interest holder consents are obtained prior to giving the offsets report for the first reporting period for a tidal restoration project in respect of land that is not included in the project area of the project but is shown by the hydrological assessment as becoming impacted land during the project's permanence period.

The effect of subsections 21(1) and 21(2) is that where the current permanence period tidal inundation map for a 25-year permanence period identifies impacted land that is not included in the project area for that project, the project proponent must obtain written consent for the eligible project activities to be carried out and those areas of land to become impacted land, from all persons who are eligible interest holders for those areas as at the end of the first reporting period for the project.

The effect of subsections 21(3) and 21(4) is that where the current crediting period tidal inundation map for a 100-year permanence period identifies impacted land that is not included in the project area for that project, the project proponent must obtain written consent for the eligible project activities to be carried out and those areas of land to become impacted land, from all persons who are eligible interest holders for those areas as at the end of the first reporting period for the project.

The effect of subsections 21(5) and 21(6) is that where the current permanence period tidal inundation map for a 100-year permanence period identifies impacted land that is not included in the project area for that project and is not identified in a current crediting period tidal inundation map, the project proponent must obtain written consent for the eligible project activities to be carried out and those areas of land to become impacted land, from all persons who are eligible interest holders for those areas with an interest that could extend beyond the crediting period of the project as at the end of the first reporting period for the project.

Division 2—Operation of tidal restoration projects

22 Defining carbon estimation areas in the project area

Section 22 establishes the requirements for defining carbon estimation areas (CEAs) in the project area of a tidal restoration project. CEAs are the areas within a project area where carbon abatement is estimated according to the land type that has established in the area.

Subsection 22(1) sets out the requirements for stratifying land into CEAs. Project proponents are required to stratify the land within their project area into at least one CEA, where all land included in a CEA is eligible land and all land included in a CEA is of a single or dominant land type that meets the requirements of the BlueCAM guidelines at the following points in time:

- at the end of the baseline period for the land
- at the end of the current reporting period
- at the end of the immediately preceding reporting period.

Where a CEA contains supratidal forest or mangroves, paragraph 22(1)(c) requires that the vegetation meets the age requirements of the Supplement. As the sequestration rates for these land use types vary depending on the age of the vegetation, the requirements of the Supplement will ensure that BlueCAM can be used to inform accurate abatement estimates.

Paragraph 22(1)(d) requires that all areas of land in a project area where excavation activities have occurred are included in a CEA for the project by the end of the reporting period during which the excavation activities occurred.

Paragraph 22(1)(e) requires that all land within a CEA must be located within one BlueCAM region.

Paragraph 22(1)(f) states that all requirements in the Supplement must also be met when stratifying CEAs.

The effect of subsection 22(2) is that where they meet the requirements of subsection 22(1), non-contiguous areas of a project may be defined as a single CEA in accordance with the Supplement.

Subsection 22(3) allows project proponents to stratify new CEAs and move land between CEAs within a reporting period. This may be required where additional land becomes impacted by the introduction of tidal flow over the duration of the crediting period, or where some (but not all) areas of land transitioned from a land type (e.g. ponded pasture) to another land type (e.g. saltmarsh) in the reporting period.

The effect of subsection 22(4) is that land cannot be part of more than one CEA or more than one project area. This prevents double-counting of abatement.

Subsection 22(5) requires that all land that is impacted by tidal introduction as a result of the eligible project activities being implemented for the project is included in a CEA for that project by the end of the reporting period during which the land is first impacted. This ensures that any positive or negative changes in abatement from an ecosystem transition can be accounted for in the reporting period in which the transition occurs.

Subsection 22(6) requires that where impacted land is to be included in a CEA for a reporting period in accordance with subsection 22(5), the CEA is defined as a new CEA.

Once land has been included in a CEA for a reporting period, subsection 22(7) requires that it continues to be included in a CEA during each reporting period that follows, unless the land is removed from the project area for the project.

Subsection 22(8) requires all CEAs to be included in calculations undertaken under Part 4 to determine the net abatement amount for each reporting period. This ensures that offsets

reports cover positive as well as negative changes in abatement associated with land type transitions.

Part 4—Net abatement amount

Division 1—Preliminary

23 Operation of this Part

Section 23 sets out that Part 4 of the Determination contains formulae to calculate net abatement. Paragraph 106(1)(c) of the Act provides that a methodology determination must specify how to calculate the carbon dioxide equivalent (CO₂-e) net abatement amount for an eligible offsets project in relation to a reporting period.

24 Simplified outline of this Part

Section 24 sets out a simplified summary of the approach to calculate the carbon dioxide equivalent net abatement amount for an eligible offsets project outlining the relevant equations used to calculate abatement from sequestration and emissions avoidance for the project area.

25 Use of BlueCAM

Section 25 sets out that BlueCAM must be used in accordance with the BlueCAM Guidelines available from time to time. The BlueCAM Guidelines provide an overview of BlueCAM's operation, including instructions on how to input data into the model and how to interpret the outputs in order to calculate the net abatement amount.

26 Overview of gases accounted for in abatement calculations

Section 26 sets out the emissions sources and carbon pools that are accounted for to determine the net abatement amount. The table indicates the greenhouse gases that are relevant for each carbon pool and emissions source associated with each land use type; where a calculation includes a parameter for an emissions source that is not applicable to the land use type in the project area, then the emissions are taken to be zero. For example, for the forest land use type, the greenhouse gases to be accounted for are nitrous oxide and carbon dioxide, zero methane emissions are included for forest land in the project area.

Division 2—Calculation of net abatement amount—general

27 Steps to calculate net abatement amount

Section 27 sets out the steps to calculate the net abatement amount for each CEA in a project area for the reporting period.

Subsection 27(1) specifies that BlueCAM must be used to calculate each of the parameters.

Subsection 27(2) sets out that if the reporting period is the first reporting period, or land in a CEA has not been included in a CEA for a previous reporting period, the emissions (including methane, nitrous oxide, and carbon dioxide where relevant for the land use type) and the carbon in live biomass (including aboveground and belowground) and soil carbon stock for the end of the baseline period must be calculated using BlueCAM, as per subsection 27(3).

Subsection 27(4) sets out that for subsequent reporting periods, and CEAs that only include land that has been included in a previous reporting period, the emissions (including methane, nitrous oxide, and carbon dioxide where relevant for the land use type) and the carbon in live biomass (including aboveground and belowground) and soil carbon stock for the end of the previous reporting period must be calculated using BlueCAM, as per subsection 27(5).

Subsection 27(6) sets out that the emissions and carbon pools for CEAs must also be calculated using BlueCAM for the end of the current reporting period. Proponents must also calculate the CO₂ emissions associated with live biomass loss from ecosystem transition. These emissions occur when vegetation dies off following tidal inundation or as a result of natural disturbance events during the reporting period and are estimated using emissions factors for each land use type in BlueCAM. Proponents must also include the emissions associated with fuel used to conduct eligible project activities such as from vehicles or earth moving equipment.

Subsection 27(7) sets out the inputs that are required to use BlueCAM to calculate the emissions and carbon pools. The Supplement and BlueCAM Guidelines specify the units, manner and form of the inputs.

Division 3—The net abatement amount

28 The net abatement amount, A

Equation 1 in section 28 sets out that the net abatement amount (A) for a project for a reporting period is the sum of the net abatement amount for the reporting period for each project area in a project.

29 Calculating the net abatement amount for a reporting period for a project area

Section 29 sets out that if the net abatement amount for a reporting period for a project area (A_r) is zero or negative (indicating an increase in emissions or reversal of sequestration), then A_r is equal to zero. Negative abatement is accounted for as carryover abatement in equation 2, set out in subsection 29(3).

Subsection 29(2) sets out the calculation for A_r in equation 2. This combines the abatement from sequestration and emissions avoidance for the project. The carbon stock change (ΔC_r) is multiplied by the sequestration buffer (B_{seq}). The buffer to be used is set out in subsection 29(4). A_r is the sum of the adjusted change in carbon stock, carry over net abatement, and change in emissions of greenhouse gases, less emissions from fuel use during the reporting period. These parameters are outputs of BlueCAM.

A_r also includes an adjustment for the total number of ACCUs issued, before the end of the reporting period, in relation to each CEA that was removed from the project area before that time and relinquished in relation to each CEA in the project area before the end of the reporting period (RC). RC is included to balance the equation in the case that ACCUs have been relinquished or CEAs were removed, as the absence of RC would have the effect of double-penalising projects for CEA removals or where ACCUs have been relinquished pursuant to a relinquishment requirement under the Act. RC is included in the calculation of A_r after the change in carbon stock has been adjusted by the sequestration buffer and is not an output of BlueCAM.

Division 4—Calculation of carbon stock change

30 Calculating sequestration abatement for a project area for a reporting period

Section 30 sets out the calculation for the change in carbon stock (ΔC_r) for a project area for the reporting period in equation 3. The change in carbon stock is the sequestration component of the net abatement. If the reporting period is the first reporting period, the change in carbon stock is the sum of the change in carbon stock at the end of the current reporting period compared with the baseline period for each CEA in the project area. For subsequent reporting periods, it is the sum of the change in carbon stock at the end of the current reporting period compared with the immediately preceding reporting period for each CEA in the project area.

Subsection 30(2) sets out the calculation of the carbon stock for a CEA for a reporting period in equation 4. The carbon stock is the sum of the mass of carbon in the soil from vertical

accretion ($C_{s,i,r}$), vegetation ($C_{v,i,r}$) which includes aboveground and belowground biomass, and the avoided loss of soil carbon ($C_{l,i,r}$) (the carbon in soil that would have been lost if the baseline land use had continued) less losses in soil carbon that would have accumulated if baseline land use had continued ($C_{a,i,r}$) multiplied by the area of the CEA. Emissions from the loss of soil carbon due to excavation activities ($E_{d,i,r}$) in the CEA during the reporting period are then subtracted. Each of these parameters for each CEA are obtained through BlueCAM.

Subsection 30(3) sets out the calculation for the emissions from the loss of soil carbon due to excavation activities in equation 5. The emissions are calculated as the mass of soil in the CEA where excavation activities occurred in the reporting period, multiplied by the soil carbon loss rate (equal to 0.5) and the area in the CEA where excavation activities occurred.

Division 5—Calculation of emissions

31 Calculating emissions avoidance abatement for a project area for a reporting period

Section 31(1) sets out the calculation for the total change in emissions of greenhouse gases for a project area in a reporting period (E_r), in tonnes CO₂-e, in equation 6. This is the emissions avoidance component of the net abatement. The total change in emissions is the difference between the sum of methane, nitrous oxide, and carbon dioxide emissions for the land use type in the baseline and the sum of methane, nitrous oxide, and carbon dioxide emissions, including from ecosystem transitions, for the land use type at the end of the reporting period for each CEA. Each of the parameters are outputs of BlueCAM.

Subsections 31(2) to (6) set out the calculations for each of the greenhouse gas emissions during the baseline and reporting period for each CEA in equations 7-11. This is the mass of the relevant emissions multiplied by the area of the CEA, and for gases other than carbon dioxide, multiplied by the global warming potential to convert the emissions to the carbon dioxide equivalent. BlueCAM determines the rate of emissions per hectare for each of the land use types. The global warming potential to be used is specified in the NGER Regulations.

Subsection 31(7) sets out the calculation for emissions from ecosystem transitions ($E_{r,TR,CO_2,i}$) for a CEA in the reporting period in equation 12. $E_{r,TR,CO_2,i}$ is the mass of carbon dioxide that is emitted from live biomass due to a transition event or a natural disturbance event, multiplied by the area of the CEA. These emissions occur when vegetation dies off following

tidal inundation or a disturbance event during the reporting period and are estimated using emissions factors for each land use type in BlueCAM.

Subsection 31(8) sets out the calculation for emissions from fuel use in equation 13. The quantity of fuel used for each fuel type is multiplied by the relevant energy content and emissions factor and summed to determine the total emissions from fuel. The energy content and emissions factors to be used are from the NGER Regulations.

Part 5—Reporting, record-keeping, notification, and monitoring requirements

Subsection 106(3) of the Act outlines that a methodology determination may subject the project proponent of an eligible offsets project to specified reporting, notification, record-keeping and monitoring requirements.

Under Parts 6, 17 and 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.

Any reporting, notification, record-keeping and monitoring requirements specified in Part 5 of the Determination are in addition to any requirements specified in the Act, the regulations or the legislative rules.

Division 1—Offsets report requirements

Part 5, Division 1, sets out information that must be included in an offsets report for a tidal restoration project that is an eligible offsets project.

32 Operation of this division

The effect of paragraph 106(3)(a) of the Act is that a methodology determination may set out requirements to be included in each offsets report. Section 32 notes that Division 1 of Part 5 sets out offsets report requirements for the purposes of that paragraph.

33 Information that must be included in offsets reports

Section 33 sets out additional information that must be included in an offsets report for a reporting period for a tidal restoration project during the crediting period. (Section 70 of the Carbon Credits (Carbon Farming Initiative) Rule 2015 sets out the information that must be included for all ERF projects in a reporting period.)

Subsection 33(1) sets out information that must be included in all offsets reports for the project.

Subsection 33(2) sets out the information that must be included in an offsets report if it is the first offsets report after the declaration of a project is made, or after an additional area of land is included in the project area, or after additional tidal introduction occurs over land that is part of the project area, in order to evidence any tidal introduction that has occurred as part of the project activities, and any regulatory approvals required to undertake project activities.

Subsection 33(3) sets out the information that must be included in an offsets report if it is the first offsets report after the declaration of a project is made, in order to evidence the consent requirements set out by section 21.

Subsection 33(4) sets out information that must be included in an offsets report if it is the first offsets report after the declaration of a project is made, or after an additional area of land is included in the project area, in order to evidence the baseline land use type of each CEA.

Division 2—Notification requirements

34 Operation of this division

The effect of paragraph 106(3)(b) of the Act is that a methodology determination may set out requirements to notify the Regulator of certain matters relating to an eligible offsets project. Section 34 notes that Division 2 of Part 5 sets out the notification requirements for the purposes of that paragraph.

35 Notification requirements

Section 35 sets out the specified notification requirements for tidal restoration projects. At a high level, these requirements ensure that the Regulator is aware of any changes in a tidal restoration project which may present risks to existing carbon stocks or potential adverse impacts.

Division 3—Record keeping requirements

36 Operation of this division

The effect of paragraph 106(3)(c) of the Act is that a methodology determination may set out requirements for the project proponent of an eligible offsets project to comply with specified record-keeping requirements. Section 36 notes that Division 3 of Part 5 sets out the record-keeping requirements for the purposes of that paragraph.

37 Record-keeping requirements

Section 37 sets out specified record-keeping requirements for tidal restoration projects. At a high level, the record-keeping requirements relate to records which demonstrate that the requirements of the Determination and Supplement have been met. This information does not need to be included in offsets reports but may be requested at any time by the Regulator.

Division 4—Monitoring requirements

38 Operation of this division

The effect of paragraph 106(3)(d) of the Act is that a methodology determination may provide specified requirements to monitor the project. Section 38 notes that Division 4 of Part 5 specifies requirements for the purposes of that paragraph.

39 Monitoring for establishment of a coastal wetland ecosystem

Section 39 sets out the requirements for monitoring the establishment of coastal wetland ecosystems in the project area of a tidal restoration project. The requirements ensure that project proponent have the information they need to operate BlueCAM and meet the offsets report requirements set out in section 33.

40 Monitoring for natural disturbance

Section 40 sets out the requirements for monitoring the project area for natural disturbances during the permanence period.

41 Consequences of not meeting requirement to monitor certain parameters

Section 41 sets out the consequences of not meeting certain monitoring requirements. Where particular parameters relevant to BlueCAM have not been monitored appropriately, section 41 outlines the alternate approach the Regulator will take to ensure that abatement estimates are conservative.

Subsection 41(9) clarifies that the Regulator may take compliance action in accordance with the Act, or the regulations or rules made under the Act where a project proponent fails to monitor a parameter required by the Determination.

Part 6—Partial reporting

42 Partial reporting

Section 77A of the Act provides that a project may be divided into two or more specified parts for the purpose of reporting.

Section 42 of the Determination specifies that if a project is divided, this cannot involve the division of a project area. This is because the impact of eligible project activities on carbon abatement and project emissions are accounted for at the project area level.

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— Tidal Restoration of Blue Carbon Ecosystems) Methodology Determination 2022

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 *Carbon Credits (Carbon Farming Initiative—Tidal Restoration of Blue Carbon Ecosystems) Methodology Determination 2022* (the Determination) sets out the detailed rules for implementing and monitoring offsets projects that sequester carbon and avoid emissions in coastal wetland ecosystems.

Project proponents wishing to implement the Determination must apply to the Clean Energy Regulator (the Regulator) and meet the eligibility requirements set out under the *Carbon Credits (Carbon Farming Initiative) Act 2011* (the Act). Offsets projects undertaken in accordance with the Determination, and approved by the Regulator, can generate Australian Carbon Credit Units, representing emissions reductions from the project.

The Determination itself does not confer rights on the project proponent to carry out the relevant activities, the project proponent must independently have the legal right to carry out project to be registered. The Determination includes provisions to limit risks of adverse impacts from carrying out activities that create eligibility for credits. These include additional consent rights in section 21 which supplement consent rights conferred by section 28A of the Act. The Determination places restrictions on activities that could impact the abatement calculations for the project, such as thinning or removing vegetation, but does so in a way that does not result in conflict with State or Territory laws or the exercise of native title rights. The context of these provisions is to set the boundaries for when the relevant activities can continue to be credited under the Act and not generally regulate the activities. In particular, participation in the scheme is voluntary and projects unable to comply with the relevant Determination requirements can exit the scheme after relevant credit relinquishment requirements are met.

Human rights implications

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

Conclusion

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

The Hon Chris Bowen MP
Minister for Climate Change and Energy