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Queensland
**REEF WATER
QUALITY**
Program



Reef protection regulations
Farming in Reef catchments

Applying for an environmental authority to undertake new cropping and horticulture

(Environmentally relevant activity 13A
for commercial cropping and horticulture)

Prepared by: Department of Environment and Science

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Glossary

Note: Where a term is not defined in this guide, the definition in the *Environmental Protection Act 1994*, its regulations and Environmental Protection Policies, the *Acts Interpretation Act 1954* and the Macquarie Dictionary must be used in that order.

Activity: Means commercial cropping and horticulture.

Activity area: Means the area(s) of land in the **river basin(s)** in the **Great Barrier Reef catchment** where **commercial cropping and horticulture** is being carried out.

Agricultural Environmentally Relevant Activity (agricultural ERA): Means:

- (1) Any of the following activities carried out, on a **commercial** basis, on land in the Great Barrier Reef catchment:
 - (a) cattle grazing
 - (b) horticulture
For example: commercial cultivation of bananas.
 - (c) cultivation of another crop.
For example: commercial cultivation of sugarcane or grains.
- (2) A lot is taken to be in the Great Barrier Reef catchment if more than 75 percent of the lot, or 20,000 hectares of land in the lot is in the catchment.

See Chapter 4A of the *Environmental Protection Act 1994*.

Agricultural ERA standard: Means an agricultural environmentally relevant activity (ERA) standard created in accordance with section 318 and 768 of the *Environmental Protection Act 1994* for the purposes of section 81 of the Act.

Appropriate person: Means a person who has professional qualifications, training or skills or experience relevant to the nominated subject matters and can give authoritative assessment, advice and analysis relevant to the subject matters using relevant protocols, **conditions**, methods or literature.

Avoid and mitigate: Means that in the first instance, any loss of irrigation water, **sediment** and **nutrients** from the **activity area(s)** to **receiving waters** is avoided. Any loss of irrigation water, sediment and nutrients from the activity area(s) must be mitigated as much as possible including to both lessen the force or intensity of the flow of water as much as possible and to lessen sediment and nutrient loads as much as possible.

Commercial: Means carried out for a fee or reward. See Schedule 19 of the Environmental Protection Regulation 2019.

Commercial cropping and horticulture: As defined in Schedule 2, part 2A, section 13A of the Environmental Protection Regulation 2019.

Conditions: Means a condition of an **environmental authority** issued by the department under the *Environmental Protection Act 1994*.

Contour bank: Means a constructed earth embankment, incorporating a channel on the upslope side, typically traversing a slope on, or close to, the contour to control and/or prevent the erosion of that slope. Also referred to as graded banks, terraces, or bunds.

Cropping history: Means where the land has been used for cropping or horticulture activities in at least three of the ten years before the cropping or horticulture activity will start, with at least one of those years being in the past five years.

Environmental authority: Means a **permit** issued by the department under Chapter 5 of the *Environmental Protection Act 1994*.

Eligibility criteria: Eligibility criteria are constraints set to ensure environmental risks associated with the operation of the environmentally relevant activity (ERA) are able to be managed by **the standard conditions**. Eligibility criteria set out the circumstances in which a standard or variation application for an environmental authority can be made. See section 112 of the *Environmental Protection Act 1994*.

The eligibility criteria for commercial cropping and horticulture are prescribed in the document *Environmentally relevant activity (ERA) standard for Commercial cropping and horticulture in the Great Barrier Reef catchment (prescribed ERA 13A) – Version 1*. A copy can be obtained from www.qld.gov.au (search for ESR/2020/5270), or by emailing palm@des.qld.gov.au or calling 1300 130 372 (and selecting option 4). The eligibility criteria are:

- The commercial cropping and horticulture will be undertaken on no more than 100 hectares of land in a particular river basin, or
- The commercial cropping and horticulture is banana cultivation that is being relocated due to the presence of Panama disease tropical race 4 on other land for which a Notice has been issued under the Biosecurity Act 2014 (Qld).

Environmentally relevant activity (ERA): means a resource activity (as defined in section 107 of the *Environmental Protection Act 1994*) or a prescribed ERA (as defined in sections 19 and 106 of the *Environmental Protection Act 1994* and prescribed under section 17 and schedule 2 of the *Environmental Protection Regulation 2019*). See section 112 of the *Environmental Protection Act 1994*.

Environmental value (EV): Means:

- (a) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety, or
- (b) another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.

See section 9 of the *Environmental Protection Act 1994*.

Fallow: For banana cultivation, fallow means an area of land that is typically used to grow bananas, that is left without that crop for a period of at least six months.

For sugarcane cultivation, fallow means an area of land that is typically used to grow sugarcane, and that is left with either grass/weedy cover, green manure or a leguminous crop (i.e. crop or ground cover with low or no nitrogen demand) for a period of at least six months.

For cropping and horticulture other than banana or sugarcane cultivation, fallow means an area of land that is typically used to grow a crop or crops that is left without that crop or crops for any period of time.

Fine sediment: Means any sediment fraction in water that measures less than 16 µm, measured as total suspended solids. Fine sediment is one of the parameters for which Reef water quality targets

are set in the Reef 2050 Water Quality Improvement Plan. Given its small size, fine sediment is transported the furthest in the marine environment, leading to increased turbidity and reduced light availability. When compared to other sediment fractions, fine sediments pose the greatest risk to the Reef.

Great Barrier Reef catchment: Means the area shown on a map prescribed by regulation as the Great Barrier Reef catchment. See section 75 of the *Environmental Protection Act 1994*.

The map is the Great Barrier Reef catchment and river basins map, accessible from www.qld.gov.au/ReefRegulations.

Measures: Means actions or procedures planned and implemented to **avoid and mitigate** the loss of soil or **surface water** run-off to receiving waters, or irrigation water to **natural waterways**.

Natural waterway: Means all or any part of a natural waterway (including bed and bank), including a creek, river, stream, lake, lagoon, swamp, wetland, spring, non-tidal or tidal waters (including the sea) that drain to the Great Barrier Reef.

Nutrients: For the purpose of commercial cropping and horticulture in the Great Barrier Reef catchment, means dissolved inorganic nitrogen.

Permit: Means an environmental authority issued by the department under Chapter 5 of the *Environmental Protection Act 1994*.

Preparatory work: Means work, other than building work, plumbing work or drainage work, carried out to prepare land for the activity, including, for example:

- (a) excavating or filling the land, or
- (b) clearing or destroying vegetation on the land, or
- (c) ploughing the land, or otherwise preparing soil on the land for planting, or
- (d) other work in, on, over or under the land that materially affects the land or its use.

See section 13A, Schedule 2 of the Environmental Protection Regulation 2019.

Receiving waters: Means any waters into which the relevant activity area drains. Waters has the same meaning as in the *Environmental Protection Act 1994* and includes all or any part of a creek, river, stream, lake, lagoon, swamp, wetland, spring, unconfined surface water, unconfined water in natural or artificial waterways, bed and bank of any waters, non-tidal or tidal waters (including the sea), and underground water.

For the purposes of commercial cropping and horticulture, receiving waters also include structures or features which may reasonably be expected to drain to *waters* including a farm drain or channel, stormwater channel, stormwater drain or roadside gutter.

Registered suitable operator: A person or corporation who the department has registered as being suitable to carry out an ERA. See Schedule 4 of the *Environmental Protection Act 1994*.

River basin: Means each part of the Great Barrier Reef catchment shown as a river basin on the Great Barrier Reef catchment and river basins map. See section 75 of the *Environmental Protection Act 1994* and [section 2.6](#) of this guide.

Sediment: For the purpose of commercial cropping and horticulture in the Great Barrier Reef catchment, means **fine sediment**.

Standard conditions: Including the relevant terms and definitions, means the minimum operating requirements an environmental authority holder must comply with. See Schedule 4 of the *Environmental Protection Act 1994*.

Surface water: Means waters other than ground waters. See Schedule 2 of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.

Waterway buffer: Means a strip of retained or planted vegetation of a minimum of five metres in width and has at least 80% **vegetated cover** in between the cropping (or **fallow**) area (of the activity) and a downslope waterway. The waterway buffer must not consist, in whole or in part, of the crop or crops being produced as part of the activity.

Vegetated cover: Means living, attached non-woody vegetation (e.g. grasses).

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1. Purpose of this guide

This guide helps producers to determine if they need a **permit** (i.e. an **environmental authority**) for new or expanded **commercial cropping and horticulture** activities in the **Great Barrier Reef catchment** (figure 1) and, if so, how to apply for a permit.

If your permit is approved, you will be required to prevent impacts to water quality from the cropping or horticulture activity by designing, implementing and maintaining **measures to avoid and mitigate fine sediment** and dissolved inorganic nitrogen entering **receiving waters**. These requirements are part of the Reef protection regulations that aim to protect the health of the Great Barrier Reef by reducing pollutant run-off reaching waterways that flow to the Reef.

The information in this guide:

- helps you determine if you need a permit before starting any new or expanded cropping or horticulture ([section 2](#))
- helps you identify what type of application you need to complete ([section 3](#))
- describes what you need to do to complete a standard ([section 4](#)), variation ([section 5](#)) or site-specific ([section 6](#)) application, and how the Department of Environment and Science (the department) will process your application once you have submitted it
- explains what you need to do to apply to amend your permit if your situation or **activity** changes ([section 7](#))
- sets out the minimum information you need to provide with a variation, site-specific or amendment application ([section 8](#))
- outlines what you must do when you have a permit ([section 9](#))
- describes what you must do in certain situations that may arise after a permit is approved ([section 10](#))
- describes optional tools you may use to assist in preparing the minimum information for your variation, site-specific or amendment application ([Appendix A](#)).

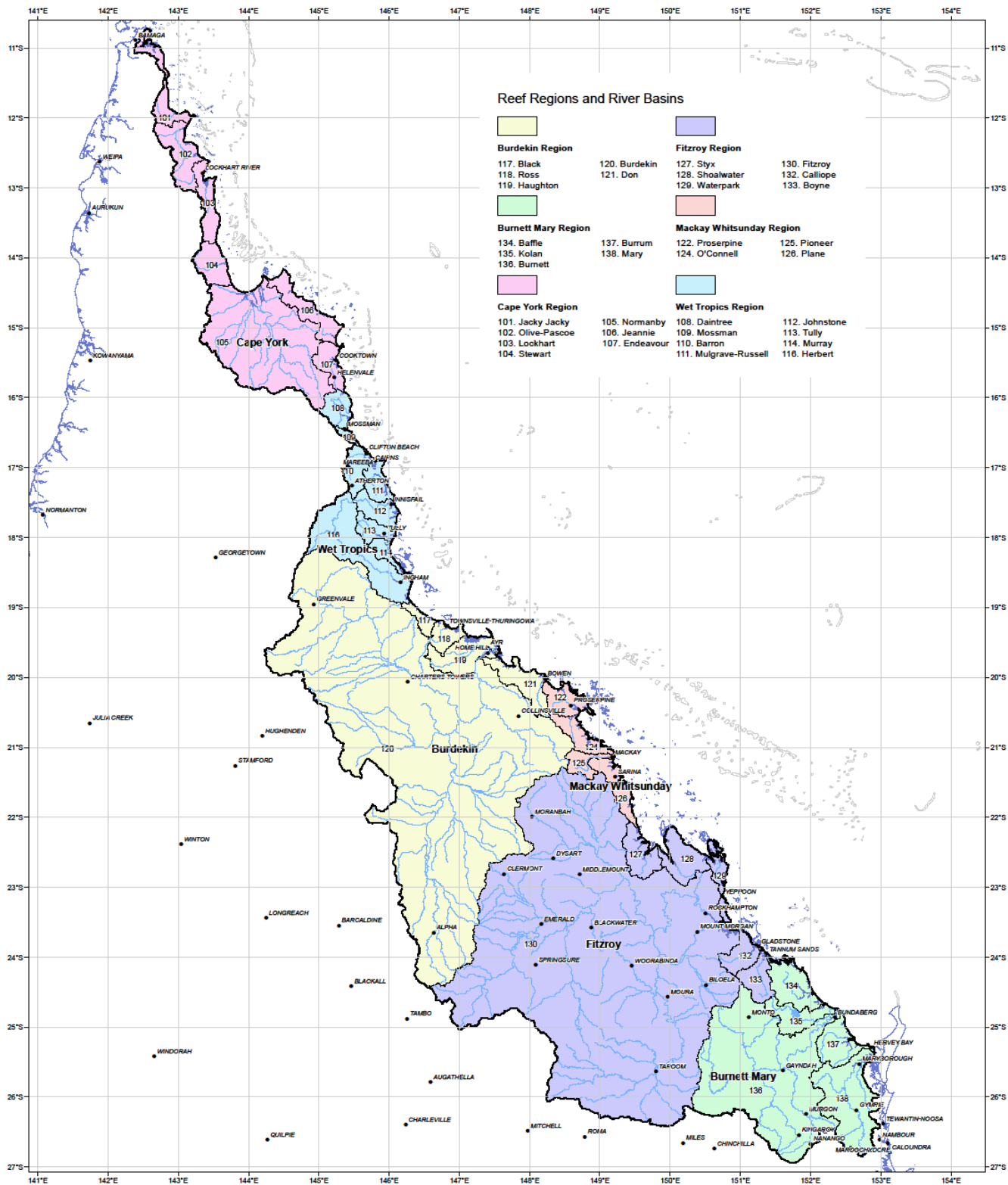
In addition to your permit, you must also comply with any **agricultural ERA standard** that applies to your cropping or horticulture activity. For example, if you are carrying out:

- sugarcane cultivation, you must also comply with the agricultural ERA standard for sugarcane cultivation (see <https://www.qld.gov.au/environment/agriculture/sustainable-farming/reef/reef-regulations/producers/sugarcane>)
- banana cultivation, you must also comply with the agricultural ERA standard for banana cultivation (see <https://www.qld.gov.au/environment/agriculture/sustainable-farming/reef/reef-regulations/producers/bananas>).

A permit for commercial cropping or horticulture in the Great Barrier Reef catchment does not exempt you from other legislative requirements, including managing acid sulfate soils and requirements under the *Water Act 2000* and the *Vegetation Management Act 1999*.

Terms that have a specific meaning and are defined in the [glossary](#) are **bold** the first time they are used in the main body of this guide.

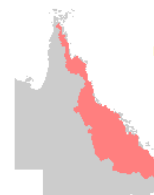
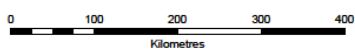
This guide explains a range of legislative requirements in plain English. If there is any inconsistency between this guide and the legislation, you must comply with the legislation.



The map shows legislative boundaries defined by the river basin boundaries shown in the Queensland Drainage Basins mapping 1998, DNRM. The boundaries and names of the Queensland drainage basins are as defined by the Australian Water Resources Management Committee (WRMC). Information includes the name and number of each drainage basin.

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- Towns
- Great Barrier Reef catchment boundary
- Coastline
- Drainage
- River basins



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Figure 1: Great Barrier Reef catchment, regions and river basins.

2. When a permit is required

From 1 June 2021, a permit is required for new or expanded commercial cropping and horticulture activities that are regulated under the *Environmental Protection Act 1994* as a prescribed **Environmentally Relevant Activity** (ERA), specifically ERA 13A¹.

This means you need a permit before you begin any cropping or horticulture activities if **all** of the following apply to the activity:

- an exclusion does *not* apply ([section 2.1](#))
 - the cropping or horticulture ([section 2.2](#)) is a **commercial** activity (i.e. for a fee or reward) ([section 2.3](#))
 - before the activity is due to commence, the land was cropped:
 - in less than three of the last ten years and
 - not in the last five years ([section 2.4](#))
- OR
- the land was *not* cropped at least once during 1 June 2018 to May 2021 ([section 2.5](#))
- the cropping or horticulture activity will be on at least five hectares within the same river basin within the Great Barrier Reef catchment ([section 2.6](#)).

You must include in your application all land within a river basin of the Great Barrier Reef catchment that you own, part own or use (e.g. lease) and that you want to undertake commercial cropping and horticulture activities on, regardless of whether the land is adjoining. You can apply to change your permit to include additional land (e.g. if you buy or lease more land at a later point). Where possible, it may be a simpler process to include land you may crop in the future in the initial application, rather than amending the permit later ([section 7](#)).

If you have at least five hectares of new cropping land in more than one river basin within the Great Barrier Reef catchment, you can apply for a separate permit for each river basin. If you want to submit one application for a single permit for all the land, you should contact the department ([section 3.2](#)) for more information.

If you are already undertaking other ERAs, you should contact the department ([section 3.2](#)) to determine if you need to amend your existing permit, rather than apply for a new permit for ERA 13A.

2.1 What activities are excluded?

The following activities are not regulated as ERA 13A, and therefore are excluded from needing a permit for ERA 13A under the *Environmental Protection Act 1994*:

- the cultivation of crops or horticulture using a closed system that prevents fine sediment or dissolved inorganic nitrogen from being released on to land, or into water, in the Great Barrier Reef catchment (e.g. hydroponics where the water is recycled on site)
- the cultivation of trees in a state forest, timber reserve or forest consent area²
- the cultivation of trees in a forest entitlement area³

¹ Schedule 2, Part 2A, section 13A of the Environmental Protection Regulation 2019

² As per the *Forestry Act 1959*

³ As per the *Land Act 1994*

- a forest practice⁴
- land where a development approval for either operational works or a material change of use of premises for high value agriculture clearing or irrigated high value agricultural clearing under the vegetation management framework exists, and is in effect prior to the requirement for a permit taking effect on 1 June 2021.

2.2 What are cropping and horticulture activities?

Cropping and horticulture activities include the following:

- all types of crops, including grains, horticulture, sugarcane and bananas
- any **preparatory work**, such as preparing soil for planting, vegetation clearing, stick raking and ploughing.

For example, cropping or horticulture includes:

- crops that have been planted for the purpose of growing crops (i.e. through cultivation of that land)
- sown pasture development where existing vegetation has been removed and tillage employed to prepare a seed bed.

Soil scarification for the purpose of, for example, pasture improvement is not considered commercial cropping or horticulture and will not require a permit for new cropping or horticulture.

2.3 When are cropping and horticulture activities commercial?

You are undertaking cropping and horticulture commercially if you are undertaking the activity for a fee or reward⁵. This includes any fruit, vegetable, grain and legume crop that you harvest for financial gain, including those you cut for sale as animal fodder.

Growing fodder crops to feed to your own cattle is not a commercial activity, even if you harvest and store the fodder crop for later use.

2.4 What is a cropping history?

You do not need a permit for land that has a **cropping history**. Land has a cropping history when the land was used for cropping or horticulture activities in at least three out of the ten years before you propose to start cropping or horticulture activities. One of those years needs to have been in the last five years.

The historical cropping or horticulture activities may have been undertaken on a non-commercial basis prior to 1 June 2021 and may have included preparatory work.

Example 1 – permit required

A grazier wants to plant sorghum to sell on 55 hectares of land in the Fitzroy basin. The land has never been used for any type of cropping in the past. A permit will be required.

Example 2 – permit not required

⁴ As per the *Vegetation Management Act 1999*

⁵ Schedule 19 of the Environmental Protection Regulation 2019

A farmer who has operated for the past 15 years wants to plant an opportunity crop in 2022 of wheat, oats and barley in a grazing paddock that is 8ha within the Burdekin basin. They previously used this land for cropping in 2012, 2013, 2014 and 2019. As the land has a cropping history, it is an existing activity and does not require a permit.

2.5 When is a permit needed for land cropped between 1 June 2018 and 31 May 2021?

If the land was used for cropping or horticulture activities (either commercially or non-commercially) between 1 June 2018 and 31 May 2021, you do not need a permit for ERA 13A for that land until at least 1 June 2026. If the land does not have a cropping history after 31 May 2026, a permit will be required for any commercial horticulture or cropping on the land after this date.

This is a transitional measure to give those who were cropping at the time, or recently prior to, the ERA 13A requirements commencing on the 1 June 2021 time to meet the cropping history requirements.

2.6 Where is the Great Barrier Reef catchment and river basins?

The Great Barrier Reef catchment receives run-off from 35 river basins that cover the regions of Cape York, Wet Tropics, Burdekin, Mackay Whitsunday, Fitzroy and Burnett Mary. [Figure 1](#) provides a state wide map.

The easiest way to find out if your land is in the Great Barrier Reef catchment, and which river basin it is in, is to request a Reef Regulatory Requirements Map report by using the online form at www.apps.des.qld.gov.au/map-request/reef-regulation/. You will need to enter the street address or lot on plan for each parcel of land that you want to undertake the new cropping or horticulture activity on.

The department will email you a report for each lot. The report will include a map showing whether the lot is within a river basin of the Great Barrier Reef catchment and a table that states the river basin(s) it is in. If a lot crosses the boundary of two river basins, the lot is deemed to be located in the river basin where more than 50% of the lot is located.

If you are unable to use the online form, you can email palm@des.qld.gov.au or call 1300 130 372 (and selecting option 4) to request a report for your land.

3. Applying for a permit

3.1 Application types

Once you have determined if you need a permit, you need to work out whether you need to make a standard, variation or site-specific application.

The type of application determines how much information you must include in your application, how the department will assess your application, and the **conditions** the department will apply to your permit.

You need to make a:

- **standard application** if your activity can meet the **eligibility criteria** and comply with the **standard conditions**

- **variation application** if your activity can meet the eligibility criteria, but you want to vary one or more of the standard conditions
- **site-specific application** if your activity does not meet the eligibility criteria.

The eligibility criteria and standard conditions for ERA 13A are set out in the document *Environmentally relevant activity (ERA) standard for Commercial cropping and horticulture in the Great Barrier Reef catchment (prescribed ERA 13A)*. You can obtain a copy by searching for ESR/2020/5270 at www.qld.gov.au or by calling 1300 130 372 (and select option 4) to request a copy.

The eligibility criteria are:

- the commercial cropping and horticulture will be undertaken on no more than 100 hectares of land in a particular river basin or
- the commercial cropping and horticulture will be banana cultivation that is being relocated due to the presence of Panama disease tropical race 4 on other land for which a Notice has been issued under the *Biosecurity Act 2014* (Qld).

The standard conditions include requirements you will need to meet to avoid and mitigate fine sediment (e.g. soil), dissolved inorganic nitrogen (e.g. fertiliser) and irrigation water entering receiving waters. They include requirements about **waterway buffers**, erosion and sediment control, irrigation and record keeping.

The *New cropping and horticulture: Guide to standard conditions (5-100 hectares)* contains practical information on the measures that you can use to meet the standard conditions for an ERA 13A activity. This document is available at www.qld.gov.au by searching for ESR/2020/XXXX or calling 1300 130 372 (and select option 4) to request a copy.

Once you have a permit, you can apply to amend your permit ([section 7](#)) for a range of reasons, such as if you are no longer able to meet the conditions of your permit or want to add additional lots that you would like to undertake cropping or horticulture activities on.

Sections [4](#), [5](#), [6](#) and [7](#) provide further information on the application and assessment processes for standard, variation, site specific and amendment applications, with [section 8](#) setting out the minimum information you need to provide with a variation, site-specific or amendment application.

If you are planning on undertaking other ERAs, such as chemical storage (ERA 8) or extractive and screening activities (ERA 16), in conjunction with ERA 13A, you should contact the department ([section 3.2](#)) to determine if you need to submit an application for a single permit for all relevant activities.

3.2 Discussing your application with the department

Before you lodge your application, you can meet with the department to discuss your application requirements or matters such as:

- submitting one application for multiple parcels of land within different river basins
- submitting an application for multiple ERAs
- adding commercial cropping or horticulture to a permit you already have for other ERAs.

To organise a pre-lodgement meeting you can email palm@des.qld.gov.au, call 1300 130 372 QGOV (13 74 68), or download the form *Application for pre-lodgement services*, available at www.qld.gov.au by searching for ESR/2015/1664.

3.3 Ensuring you are a registered suitable operator

You must be a **registered suitable operator** before the department can issue you a permit. A registered suitable operator is a person or corporation who the department has registered as being suitable to carry out an ERA.

If you think you may already be a registered suitable operator, you can search the suitable operator register, available at www.qld.gov.au by searching for 'registered suitable operator' or calling 1300 130 372 (and select option 4).

If you are not a registered suitable operator, you can apply to become one by completing an application online at Online Services at www.des.qld.gov.au/onlineservices. Otherwise you can request the form *Application to be a registered suitable operator* (reference ESR/2015/1771) by emailing palm@des.qld.gov.au or calling 1300 130 372 (and selecting option 4) and sending it to the department using the postal details on the form.

You can submit this application with your ERA 13A permit application or separately.

To be registered as a suitable operator, the department will consider whether you (or your business partner/s) have:

- been convicted of an environmental offence
- had an environmental authority (or any permit similar to an environmental authority) cancelled or suspended
- had a suitable operator registration (or similar registration) cancelled or suspended
- ever been issued a compliance notice under the *Environmental Protection Act 1994*.

3.4 Obtaining and submitting an application form

You can complete an online application form through Online Services at www.des.qld.gov.au/onlineservices. Otherwise, you can search at www.qld.gov.au, email palm@des.qld.gov.au or call 1300 130 372 (and selecting option 4) to obtain a copy of one of the following forms:

- standard application form – ESR/2020/5273
- variation application form – ESR/2000/5272
- site-specific application form – ESR/2020/5274
- amendment application form – ESR/2021/XXXX

[These application forms will be available by 1 June 2021]

You can post, deliver or email your completed application to the department using the address on the form.

3.5 Paying the application fee

You must pay the application fee when you submit your application.

As the fees are indexed annually, they can be found in the information sheet *Fees for permits for environmentally relevant activities (ERAs)*. *[The department will update this information sheet in 2021 to include the fees for ERA 13A.]* You can obtain a copy by searching for ESR/2015/1721 at www.qld.gov.au or calling 1300 130 372 (and select option 4) to request a copy.

If you submit your application through Online Services at www.des.qld.gov.au/onlineservices, you can pay the fee online using a debit or credit card. If you post, deliver or email your application, you will need to pay the fee by sending a cheque or money order, which is payable to the Department of Environment and Science, using the postal address provided on the application form.

4. Standard applications

The application and assessment process for standard applications is straight-forward as these activities are considered a lower risk.

4.1 Preparing a standard application

For a standard application, you need to complete each question on the application, including the section where you declare that you can comply with the eligibility criteria and the standard conditions. It is an offence under the *Environmental Protection Act 1994* to give information that you know is false or misleading. You must also pay the application fee ([section 3.5](#)).

4.2 After you have submitted your standard application

After receiving your standard application, the department will check that the application is 'properly made' by ensuring you:

- are a registered suitable operator
- completed each question on the application form, including stating that you can meet the eligibility criteria and can comply with the standard conditions
- paid the application fee.

If parts of your application are missing, the department will provide you with a notice (within 10 business days after receiving your application) outlining what action you need to take to complete the application correctly. The notice will outline how long you have to take the action stated, which will be at least 20 business days. Your application will lapse if you do not take the action within this time.

If your application is properly made, the department will approve your standard application within 20 business days. The permit will require you to comply with the standard conditions. The department will post or email the permit to you within five days of approving it.

The details of the permit will be included on the register of environmental authorities⁶, which can be viewed online at www.apps.des.qld.gov.au/env-authorities/. This register includes details such as the permit number, who is the holder of the permit, the address of the activity, and a copy of the permit.

The permit will list each lot on plan that you are permitted to undertake cropping or horticulture activities on. While the total area of the lots may be greater than 100 hectares, the area you use for ERA 13A must be less than 100 hectares. You are only licensed to carry out the ERA 13A on the nominated lots and if you would like to change this, you must apply to amend your permit ([section 7](#)).

For detailed information on the legislative requirements and processes that the department must follow when checking and assessing your application, refer to the *Approval processes for*

⁶ See section 540 of the *Environmental Protection Act 1994*.

environmental authorities, available at www.qld.gov.au by searching for ESR/2015/1743 or calling 1300 130 372 (and select option 4) to request a copy.

5. Variation applications

5.1 Preparing a variation application

For a variation application, you need to complete each question on the application form. This requires you to state which standard conditions you can meet and which ones you want to vary. For each condition that you want varied, you must include an assessment of the likely impact on the **environmental values** from any release of fine sediment or dissolved inorganic nitrogen into the water, or catchment waters, of the Great Barrier Reef as a result of your proposed cropping or horticulture activity⁷. This includes providing details of the measures that you will use to avoid and mitigate any likely impacts from the proposed variation. [Section 8](#) provides more guidance on the minimum information that you need to provide with your application, while [Appendix A](#) describes optional tools to help you provide this information. You only need to provide this information for the condition(s) that you are applying to vary. You must also pay the application fee ([section 3.5](#)).

5.2 After you have submitted your variation application

After receiving your variation application, the department will check that it is 'properly made' by checking that you:

- are a registered suitable operator
- completed each question on the application form, including stating that your activity meets the eligibility criteria
- paid the application fee
- provided the minimum information ([section 8](#)) for the condition(s) that you are applying to vary.

If parts of your application are missing, the department will provide you with a notice (within 10 business days after receiving your application) outlining what action you need to take to complete the application correctly. The notice will outline how long you have to take the action stated, which will be at least 20 business days. Your application will lapse if you do not take the action within this time.

If your application is properly made, the department will check if you have provided sufficient information about the proposed variation for the department to make a decision on your application. This includes enough information to assess whether the measures will sufficiently avoid and mitigate water quality impacts caused by any release of fine sediment or dissolved inorganic nitrogen associated with the variation.

If you did not provide sufficient information, the department will request further information from you about the proposed variation (an 'information request notice'). This will be within 10 business days from when the department determined your application was properly made. The information request notice will state how long you have to provide the information, which will be at least six months. If you do not respond to this notice, or do not request an extension of the timeframe at least 10 business days before the due date, your application will lapse.

⁷ Section 125(1)(l) and 125(5) of the *Environmental Protection Act 1994*.

Once you have provided sufficient information, the department will assess the information to make a decision on whether to approve your application, including what conditions to put on the permit. The department will issue the permit subject to either:

- the standard conditions you declared you could meet, as well as with one or more conditions that are different to the standard conditions; or
- all of the standard conditions.

You may be required to comply with all of the standard conditions if, for the conditions you asked to be varied, you could not demonstrate how you will avoid and mitigate water quality impacts to the water, or catchment waters, of the Great Barrier Reef.

Before making a decision about your application, the department will usually provide you with an opportunity to review a draft of any proposed conditions that are different to the standard conditions.

The department will make a decision within 40 business days of having received a properly made application or, where further information was requested, within 20 business days of having received the further information⁸. The department will advise you of the decision in writing (via email or post) within five business days of the decision, and include a copy of the permit. If the department has included a condition on your permit that you have not agreed to, details of your right to a review of the decision will be included.

The details of the permit will be included on the register of environmental authorities⁹, which can be viewed online at www.apps.des.qld.gov.au/env-authorities/. This register includes details such as the permit number, who is the holder of the permit, the address of the activity, and a copy of the permit.

For detailed information on the legislative processes the department must follow when checking and assessing your application, refer to *Approval processes for environmental authorities*, available at www.qld.gov.au by searching for ESR/2015/1743 or calling 1300 130 372 (and select option 4) to request a copy.

6. Site-specific applications

6.1 Preparing a site-specific application

For a site-specific application, you need to complete each question on the site-specific application form and include an assessment of the likely impact on the environmental values from any release of fine sediment or dissolved inorganic nitrogen into the water, or catchment waters, of the Great Barrier Reef as a result of your proposed cropping or horticulture activity¹⁰. This includes providing details of the measures that you will use to avoid and mitigate any likely impacts.

[Section 8](#) provides more guidance on the minimum information that you need to provide with your application, while [Appendix A](#) describes optional tools to help you provide this information. You need to provide this information for all the land.

⁸ The department can extend the timeframes through written notice.

⁹ See section 540 of the *Environmental Protection Act 1994*.

¹⁰ Section 125(1)(l) and 125(5) of the *Environmental Protection Act 1994*.

You must also pay the application fee ([section 3.5](#)).

6.2 After you have submitted your site-specific application

After receiving your site-specific application, the department will check that it is 'properly made' by checking that you:

- are a registered suitable operator ([section 3.3](#))
- completed each question on the application form
- paid the application fee
- provided the minimum information ([section 8](#)).

If parts of your application are missing, the department will provide you with a notice (within 10 business days after receiving your application) outlining what action you need to take to complete the application correctly. The notice will outline how long you have to take the action stated, which will be at least 20 business days. Your application will lapse if you do not take the action within this time.

If your application is properly made, the department will check if you have provided sufficient information for the department to make a decision on your application. This includes enough information to assess whether the measures will sufficiently avoid and mitigate water quality impacts caused by any release of fine sediment or dissolved inorganic nitrogen from with the activity.

If you did not provide sufficient information, the department will request further information from you (an 'information request notice'). This will be within 20 business days of when the department determined your application was properly made. The information request notice will state how long you have to provide the information, which will be at least six months. If you do not respond to this notice, or do not request an extension of the timeframe at least 10 business days before the due date, your application will lapse.

Once you have provided sufficient information, the department will assess the information to make a decision on whether to approve your application, including what conditions to put on the permit. The conditions may require you to implement and maintain measures to avoid and mitigate water quality impacts. Additionally, if you are proposing to only use a portion of a lot(s), the department may include a condition that describes (for example by using a map or latitude and longitudes) specifically where the activity is to be carried out within the lot(s).

Before making a decision on your application, the department will usually provide you with an opportunity to review a draft of any proposed conditions.

The department will make a decision within 40 business days of having received a properly made application or, where further information was requested, within 20 business days of having received the further information¹¹. The department will advise you of the decision in writing (via email or post) within five business days of the decision.

If the decision is to approve the application, a copy of the permit will be included. If the department has included conditions on the permit that you have not agreed to, details of your right to a review of the decision will be included.

¹¹ The department can extend the timeframes through written notice.

The details of the permit will be included on the register of environmental authorities¹², which can be viewed online at www.apps.des.qld.gov.au/env-authorities/. This register includes details such as the permit number, who is the holder of the permit, the address of the activity, and a copy of the permit.

If the decision is to refuse the application, details of your right to seek a review of the decision will be included. There is a subsequent right to appeal a decision if you are dissatisfied with the review decision. The department may refuse an application if you cannot demonstrate how you will undertake the activity to avoid or mitigate water quality impacts caused by any release of fine sediment or dissolved inorganic nitrogen.

For detailed information on the legislative processes that the department must follow when checking and assessing your application, refer to *Approval processes for environmental authorities*, available at www.qld.gov.au by searching for ESR/2015/1743 or calling 1300 130 372 (and select option 4) to request a copy.

7. Amendment applications

You may make an application at any time to amend your permit. For example, if you can no longer meet the conditions of your permit or if you want to add additional lot(s) on plan.

You do not need to amend your permit if you change crop types and you can continue to meet the conditions of your permit. This is because your permit is for commercial cropping and horticulture – it is not for a specific crop type.

7.1 Preparing an amendment application

For an amendment application, you need to complete each question on the amendment application form, including stating whether or not you can comply with the eligibility criteria and whether you are seeking to amend a standard condition. You must also provide the minimum information required for the amendment you are applying for ([section 8](#)) and pay the application fee ([section 3.5](#)).

7.2 After you have submitted your amendment application

After receiving your amendment application, the department will decide whether the proposed amendment is 'minor' or 'major' with 10 business days after receiving the application. An example of a minor amendment is applying to add additional lot(s) on plan, but the total activity area will remain 100 hectares or less, and you can continue to meet the conditions of your existing permit. An example of a major amendment is changing a standard condition.

If the amendment is major, the department will need to undertake a detailed assessment of your application. You must pay an assessment fee (which is in addition to the application fee) before the department can start this process. The fee is set out in the information sheet *Fees for permits for environmentally relevant activities (ERAs)*. You can obtain a copy by searching for ESR/2015/1721 at www.qld.gov.au or calling 1300 130 372 (and select option 4) to request a copy. More information on the process for amending applications is set out in the *Guideline – Major and minor amendments*. You can obtain a copy by searching for ESR/2015/1684 at www.qld.gov.au or calling 1300 130 372 (and select option 4) to request a copy.

¹² See section 540 of the *Environmental Protection Act 1994*.

For detailed information on the legislative processes and timeframes that the department must follow when checking and assessing your amendment application, refer to *Approval processes for environmental authorities*, available at www.qld.gov.au by searching for ESR/2015/1743, or calling 1300 130 372 (and select option 4) to request a copy.

If the department approves your amendment application, you will be issued with a decision notice and an amended permit.

If you are proposing to only use a portion of a lot and plan, the department may include a condition that describes specifically where the activity is to be carried out within the lot, for example by using a map or latitude and longitudes.

8. Minimum information requirements for variation, site-specific and amendment applications

This section outlines the minimum information that you need to include with your variation, site-specific or amendment application for the department to have sufficient information to assess your application. This includes:

- a description of the cropping or horticulture activity proposed and the land where it will occur ([section 8.1](#))
- a description of the environmental values ([section 8.2](#)) that may be impacted by any release of fine sediment and dissolved inorganic nitrogen into the water, or catchment waters, of the Great Barrier Reef as a result of your activity
- an assessment of the risks, and likely impacts, of fine sediment and dissolved inorganic nitrogen from the activity to the environmental values, and the measures you will use to avoid and mitigate the impacts ([section 8.3](#)).

The minimum information you need to provide:

- for a variation application – is limited to the conditions you are applying to vary
- for an amendment application – is limited to the changes you wish to make to your permit
- for a site-specific application – is for all the land within each lot where the activity will be carried out. If areas within a lot will not be used for the activity (e.g. wetlands or areas of acid sulfate soils), you should show those areas on a map and state that they will not be cropped.

If your application does not provide enough information for the department to decide your application, the department may request further information on the proposed activities and mitigation measures. This will delay assessment of your application and, in some situations, the department may not approve your application.

8.1 Activity and land

Your application must describe the:

- activity, for example:
 - the types of crops that will be grown
 - proposed farm practices (e.g. cover during **fallow** periods)
 - the location of infrastructure and hard stand areas
- land where the activity will take place, for example:
 - location of **activity areas**

- property boundaries
- topography
- rainfall patterns and intensity
- drainage paths and structures
- soil types
- vegetation
- roads
- any other site features that may influence how the risks are addressed.

8.2 Environmental values

Your application must describe the environmental values that may be impacted by fine sediment and dissolved inorganic nitrogen entering the water, or catchment waters, of the Great Barrier Reef as a result of your activity.

Environmental values¹³ are the qualities that make water suitable for supporting aquatic ecosystems and human uses. A range of environmental values for water are identified for protection under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019 (see www.environment.des.qld.gov.au/management/water/policy).

Table 1 provides examples of environmental values for water that may be impacted by new cropping or horticulture activities and that are declared as an environmental value under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019. This table is provided for guidance only. Other environmental values (e.g. local wetlands) may be relevant depending on your land and the **natural waterways** in the surrounding area.

[Section A2](#) describes an environmental values report that you may use to help identify the environmental values that are declared under Schedule 1 of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019 and that may be relevant to your proposed activity.

Table 1: Examples of environmental values that may be impacted by new cropping or horticulture.

Environmental value	Potential impact	When it may apply
Aquatic ecosystem	Fine sediment or dissolved inorganic nitrogen may directly impact the biological integrity of the Great Barrier Reef catchment waters or waters of the Great Barrier Reef.	This environmental value applies to all Queensland waters but the level of protection required will depend on whether the waterway is identified as high ecological value, slightly disturbed (SD), moderately disturbed (MD) or highly disturbed (HD) in a document under Schedule 1 of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019. (see www.environment.des.qld.gov.au/management/water/policy).
Wetland	Fine sediment or dissolved inorganic nitrogen may impact biological integrity of the wetland.	The activity involves (or may involve) release of water to a wetland for treatment.

¹³ See section 9 of the *Environmental Protection Act 1994*.

8.3 Risks, impacts and measures

Your application needs to provide an assessment of the risks, and likely impacts, to the environmental values from any release of fine sediment or dissolved inorganic nitrogen into the water, or catchment waters, of the Great Barrier Reef as a result of your activity, and the measures you will use to avoid and mitigate the impacts. This should include detailed information on:

- the likely loss of fine sediment, **surface water** run-off and irrigation water from the activity area
- the design of the measures to be used to avoid and mitigate likely impacts
- how the measures will be constructed and maintained
- the data, processes and calculations used
- who prepared the assessment, including the qualification and experience of any **appropriate persons** who prepared or assisted with the information.

You may need to consider whether the measures have been designed to ensure that they will not have a negative impact on nearby land. Inappropriately designed or placed measures may divert water, sediment or **nutrients** onto neighbouring properties and this may impact water quality.

If you are applying for a permit for activity areas located in different parts of a river basin, you may need to provide separate information for each area. For guidance on the appropriate scale to assess your activity, see Chapter 14 and Table 14.1 of the *Guidelines for Surveying Soil and Land Resources* (McKenzie, Grundy, Webster, & Ringrose-Voase, 2008).

9. Complying with a permit

Once you have a permit to undertake ERA 13A activities, you can commence your activity. There is no requirement to commence your cropping or horticulture activities within a certain period of time of obtaining the permit but, once you have a permit, you must comply with the conditions, as well as the requirements of any other relevant legislation. It is an offence not to comply with the conditions of your permit and penalties may apply.

In addition to complying with the conditions of your permit, you must meet the minimum practice agricultural standards (i.e. agricultural ERA standards prescribed under the Environmental Protection Regulation 2019) where these apply to the crop(s) being grown. Commodity specific agricultural ERA standards currently apply for sugarcane and bananas, and are available at www.qld.gov.au/ReefRegulations or you can phone 1300 130 372 (and select option 4) to request a copy. You must comply with these standards as soon as the permit commences, regardless of when the minimum practice agricultural standards commence in your region. This includes in the Cape York region.

For ERA 13A permits, there is no requirement to pay an annual fee or provide an annual return to the department.

A permit for new cropping or horticulture activity does not have an expiry or end date. However, you can voluntarily surrender or suspend a permit if you are no longer carrying out commercial cropping and horticulture, or the department can suspend or cancel the permit in certain circumstances ([section 10.3](#)).

There is a range of tools the department can use to ensure permit holders comply with their permit. You can find more information in the guideline *Environmentally Relevant Activities Compliance and*

Enforcement, available at www.qld.gov.au by searching for ESR/2016/2514 or calling 1300 130 372 (and select option 4) to request a copy.

10. Dealing with your permit after approval

10.1 Combining (i.e. amalgamating) two permits

If you have more than one permit, you may apply for one ‘amalgamated environmental authority’ (permit) that covers all of the activities. You can find more information on www.qld.gov.au by searching for ‘amalgamate environmental authorities’.

10.2 Transferring a permit

You may need to transfer a permit if:

- you sell your land and the new owner will continue cropping on the land
- your lease on the land ends but the landowner or another person will continue cropping on the land.

If the new person does not wish to continue the activity, you can surrender your permit ([section 10.3](#)).

If you buy land that already has a permit for ERA 13A and you want to continue cropping or horticulture on the land, you need to have the permit transferred to you.

You can find more information on applying to transfer a permit at www.qld.gov.au by searching for ‘transfer an environmental authority’.

10.3 Surrendering or suspending your permit

Application led surrenders and suspensions

You can voluntarily surrender or suspend your permit if you are no longer carrying out commercial cropping and horticulture either temporarily or permanently. Once your permit is surrendered or suspended, you cannot legally carry out the activity.

There is no benefit to suspending your permit for ERA 13A as there is no annual fee for ERA 13A. For other ERAs, permit holders normally suspend their permit so the annual fee does not have to be paid. The suspension can be terminated once you wish to re-start your activity.

If you are stopping your activity permanently and you do not need to transfer the permit, you should surrender the permit. If you later want to restart commercial cropping and horticulture on the land, you will need to apply for a new permit.

Department led surrenders and suspensions

The department may cancel or suspend a permit in certain circumstances. The three most relevant circumstances are if the:

- permit was issued under materially false or misleading information
- permit holder is convicted of an environmental offence, or
- permit holder ceases to be a suitable operator.

The department must give the permit holder a notice of the action it proposes to take and the grounds for the proposed action. The department will consider representations from the holder and issue a decision notice.

If your permit is suspended or cancelled, you cannot legally carry out the activity.

DRAFT

11. Reference list

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Appendix A: Optional tools for variation, site-specific and amendment applications

This appendix describes optional tools you may use to assist in preparing the minimum information for your variation, site-specific or amendment application.

A1 Appropriate person

An appropriate person can help you provide the minimum information required to include in your application. This may save you time and ensure you have high quality information.

An appropriate person to do a land limitations assessment would be a Certified Professional Soil Scientist with a specialist competency in Australian soil survey and land suitability assessment.

An appropriate person to prepare an erosion and sediment control plan would be someone who has undertaken formal training in this area, such as an environmental engineer who is affiliated with the International Erosion Control Association or Soil Science Australia, and who has extensive experience in designing soil conservation and water quality protection measures.

A2 Environmental values report

To assist you identify environmental values for water that have been mapped in your area, you can request an environment values report by using the online form at www.qld.gov.au/XXXX, emailing palm@des.qld.gov.au or calling 1300 130 372 (and selecting option 4) [*report tool to be available by 1 June 2021*]. You will need either the street address or lot on plan for each parcel of land that contains the proposed activity area. The department will email or post you a report for each lot with a map showing the declared environmental values at, or near, the location of this area.

Including this report with your application will provide a description of any environmental values that are prescribed under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019, ¹⁴a Matter of State Environmental Significant (MSES), or a wetland environmental value.

You should also consider if there are other values for water (e.g. local wetlands) that may be impacted that are not included in the mapping.

A3 Land limitations assessment

An optional process to help identify the likely impact of the proposed cropping or horticulture on the environmental values of the receiving waters from any release of fine sediment and dissolved inorganic nitrogen is a 'land limitations assessment'. This process has been adapted from the *Guidelines for Agricultural Land Evaluation in Queensland* (DSITI and DNRM, 2015), available at www.publications.qld.gov.au, and *Guideline for co-ordinated projects involving clearing for agriculture (land suitability requirement)* (Department of Natural Resources, Mines and Energy (DNRME), 2018), available at www.qld.gov.au¹⁵.

¹⁵ While DNRME and DSITI developed these guidelines, they are unable to provide further information on how to conduct a land limitations assessment. For further information on this process, please contact the Department of Environment and Science by emailing palm@des.qld.gov.au or calling 1300 130 372 (and selecting option 4).

While these guidelines describe how to assess land for its suitability for specific crops, a land limitations assessment involves assessing the potential for soil erosion and nutrient leaching only, which are limitations that pose a direct risk to water quality. While assessing all the attributes of the land in a full land suitability assessment would be valuable in planning for a successful enterprise, it is not a requirement to obtain a permit for ERA 13A.

The land limitations assessment process involves:

- Gathering existing soils and landscape information, and identifying whether additional data needs to be collected, so that the following limitations can be assessed:
 - water erosion (what is the likely impact of water runoff?)
 - subsoil erosion (is your soil more vulnerable to erosion due to sodic soils?)
 - nutrient leaching risk (will it be difficult to control the leaching of nutrients in your soil?).
- Undertaking a field survey and mapping landforms and soil types across the activity area into unique map areas (UMAs).
- If additional data is needed, obtaining relevant laboratory analysis of soil samples.
- Using the soil and landscape data to obtain a score for each limitation for each UMA by entering it into the online calculator at www.qld.gov.au/XXXX [to be available by 1 June 2021]. The score indicates the potential for soil erosion and nutrient leaching as a result of the activity, and therefore the likely risk of water quality impacts if measures are not taken to avoid or mitigate the likely impacts.

Gathering existing soils and landscape data

Table A1 sets out each limitation, its impacts and the attributes that are required. You will also need data on topography and local rainfall intensity.

Table A1: Parameters (limitations) used in the land limitation assessment tool, how they are assessed, and their potential impacts on water quality

Limitation and what it assesses	Impact	Attributes required for land limitations assessment	Explanation and guidance for attribute derivation
<p>Water erosion</p> <p>Potential for accelerated soil loss when surface cover is reduced or soil is bare.</p>	Soil loss due to water erosion	<p>Soil erodibility factor (K-factor)</p> <p>Slope (% slope)</p> <p>The impact of slope is assessed with reference to rainfall erosivity (R) – an index that considers the likelihood of intense storm rainfall</p>	<p>K factor is determined from the following specific attributes:</p> <ul style="list-style-type: none"> - <i>Laboratory data (surface soil):</i> % clay, silt and fine sand; % organic matter - <i>Field data:</i> surface soil structure and soil profile permeability. <p>Refer to Rosewell and Loch (2002) for equation used to estimate K factor.</p>

Limitation and what it assesses	Impact	Attributes required for land limitations assessment	Explanation and guidance for attribute derivation
<p>Subsoil erosion</p> <p>Potential for subsoil erosion due to dispersible (and/or slaking) subsoils, which may result in gully, tunnel or stream bank erosion.</p>	<p>Soil loss and land degradation from subsoil erosion</p>	<p>Thickness of surface soil layer (A horizon) that overlies a susceptible subsoil (B horizon).</p> <p>Dispersion potential of subsoil (as measured by sodicity – exchangeable sodium percentage, ESP).</p>	<p>This limitation applies to soils with clay B horizons that are sodic or dispersive.</p> <p>20 cm is the critical thickness for the A horizon. If less than this, there is a high probability of significant erosion. An ESP of ≥ 6 in the B horizon is confirmed by laboratory analysis.</p>
<p>Nutrient leaching risk</p> <p>Potential for nutrient leaching into groundwater and waterways.</p>	<p>Excessive deep drainage results in the movement of nutrients into the groundwater with potential impacts downstream.</p> <p>Match nutrient application to capacity of soil to retain nutrients.</p>	<p>Site drainage class</p> <p>Soil profile permeability</p> <p>Soil profile texture</p> <p>Soil profile (A horizon) permeability</p> <p>Soil profile (B horizon) permeability</p>	<p>Site drainage and soil profile permeability are assessed from field observations, based on assessment of both site (e.g. slope, landscape position) and soil profile characteristics (e.g. soil colour, texture, degree of mottling).</p>

Table A2 sets out possible sources of existing information. Section 4.4 of the *Guideline for co-ordinated projects involving clearing for agriculture (land suitability requirement)* (Department of Natural Resources, Mines and Energy (DNRME), 2018) also provides information on existing data sources, and the circumstances in which additional data will need to be collected via a field survey.

Generally, spatial data can be viewed on the Queensland Globe at www.qldglobe.information.qld.gov.au/ or downloaded from QSPATIAL at www.qldspatial.information.qld.gov.au/. Reports and maps are also available from the Queensland Government library catalogue at www.qld.gov.au/environment/library, or from the Publications Portal at www.publications.qld.gov.au/.

Table A2: Possible sources of data

Data	Possible source
Soil survey and other land resource maps and reports	Queensland's Soil and Land Information (SALI) database, www.qld.gov.au/environment/land/management/soil/soil-data/mapping
Topographic maps	QTopo at www.qtopo.information.qld.gov.au/
Aerial photographs	QImagery at www.qimagery.information.qld.gov.au/
Satellite imagery	Google Earth, www.google.com/earth/ Queensland Globe, www.qldglobe.information.qld.gov.au/
Climate information	Design Rainfall Data System (www.bom.gov.au/water/designRainfalls/revised-ifd/) Longpaddock (www.longpaddock.qld.gov.au/)

Mapping soil types into UMAs

Soil types and land attributes across the activity area should be mapped as unique mapping areas (UMAs). Each UMA will have a particular combination of soil type, soil attributes, slope and elevation, and hence land use limitations. An activity will most likely have several UMAs. You may later refine the UMAs if you undertake a field survey that provides new data.

Further information is available on identifying and describing UMAs in section 2.3.1 and 3.2.1 of the *Guidelines for Agricultural Land Evaluation in Queensland* (DSITI and DNRM, 2015).

Undertaking a field survey

A field survey by an appropriate person ([section A1](#)) may be required to collect additional data to assess likely water quality risks. Information about collecting soils data and laboratory analysis of samples is provided in section 4.6, Appendix 1 and Appendix 3 of the *Guideline for co-ordinated projects involving clearing for agriculture (land suitability requirement)* (DNRME, 2018).

Scoring the potential for water erosion and nutrient leaching

The soils and landscape data for each UMA can be entered into the online calculator, available at www.qld.gov.au/XXXX [online calculator to be available by 1 June 2020]. The calculator will generate a score of between 1 and 5 for each limitation for each UMA. A score of 1 for both water erosion and subsoil erosion indicates the potential for sediment loss as a result of your proposed cropping activity in that UMA is relatively small. A score of 1 for nutrient leaching risks indicates your proposed cropping or horticulture activity in that UMA would likely result in minimal movement of nutrients from the soil into groundwater. The potential for erosion or leaching increases up to a score of 5, which indicates your proposed cropping or horticulture activity in that UMA, if unmitigated, is likely to generate relatively large quantities of sediment or nutrients leaching from the soil.

The calculator requires you to enter land attributes (e.g. soil erodibility, soil permeability, slope) and select a specific crop type to assess the potential for erosion and nutrient leaching. This means that changing from one crop to another may change the score and likely impact on water quality. While the permit will not be issued for a specific crop, the conditions of the permit will be tailored to the risks identified. As such, you should consider all the crops to be planted and any likely changes when you are conducting your land limitations assessment and when you are designing measures.

A4 Erosion and sediment control plan

An effective way of identifying appropriate measures to mitigate the potential for erosion is by developing an erosion and sediment control plan and submitting this with your application. An erosion and sediment control plan should set out where measures that avoid and mitigate sediment loss, surface water run-off and irrigation water loss to receiving waters, such as **contour banks**, will be located and how they will be designed and maintained.

The *Soil Conservation Guidelines for Queensland* (Carey, Stone, Norman, & Shilton, 2015) provide information on developing a soil conservation plan and best practice approaches to designing erosion and sediment control measures.

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