Department of **Natural Resources and Mines, Manufacturing, and Regional and Rural Development**

Guideline for determining category C areas

Vegetation management

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Approval

Position	Name	Date
Director – Vegetation Policy and Regulatory Strategy and Capability	Peter Lazzarini	14/03/2025

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This publication has been compiled by Vegetation Policy, Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development.

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Purpose

This guideline will help determine whether vegetation in a category C area on the Regulated Vegetation Management Map (RVMM) is classified as high value regrowth (HVR) as defined in the *Vegetation Management Act 1999* (VMA).

Requests to modify category C areas can be made by submitting an application for a Property Map of Assessable Vegetation (PMAV). Information about the PMAV process and the application form can be found on the Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development (the department) website. Visit www.qld.gov.au and search 'vegetation map correction'.

Guideline

1. What is meant by a category C area containing HVR - Policy and legislative context

Section 20AN of the *Vegetation Management Act 1999* (VMA) defines a category C area as an area that contains HVR.

The VMA defines HVR as vegetation located—

a)*on freehold land, indigenous land, or land subject of a lease issued under the Land Act 1994 for agriculture or grazing purposes or an occupation licence under that Act; and*

b)in an area that has not been cleared (other than for relevant clearing activities) for at least 15 years, if the area is—

i.an endangered regional ecosystem; or

ii.an of concern regional ecosystem; or

iii.a least concern regional ecosystem.

Section 4.6 of the State Policy for Vegetation Management (2019) sets out provisions to be taken into account when considering PMAVs. Section 3 and 4 require that an area should be assessed for its suitability in sequence for category B area, then for category C area, then for category R area. The State Policy states that:-

- an area will not be made category X area if it is identified as remnant or as high value regrowth using the latest version of the *Methodology for surveying and mapping of regional ecosystems and vegetation communities in Queensland,* Neldner et al. (Queensland Herbarium's Mapping Methodology)
- In assessing applications for a PMAV, have regard to best available scientific knowledge and the precautionary principle, and apply approved operational policies and guidelines.

The intent of these two policy statements is to ensure that in cases where a mapped category C area is challenged, the resulting PMAV assessment process is transparently and consistently applied using the published Queensland Herbarium's Mapping Methodology. This guideline provides additional guidance on that assessment process.

If the area is assessed in sequence and not classified as category B, C or R area then an area can be assessed for category X area classification.

Section 20CA of the VMA provides circumstances where the department cannot make an area a category X area. These include where:

- clearing was carried out under a development approval for the area for fodder harvesting, managing thickened vegetation, managing encroachment, weed control or necessary environmental clearing;
- clearing was carried out under an Accepted Development Vegetation Clearing Code (ADVCC) for native forest practice, fodder harvesting, managing thickened vegetation, managing encroachment, weed control or necessary environmental clearing;
- clearing has been carried out under an Area Management Plan for fodder harvesting, managing thickened vegetation, managing encroachment, weed control or necessary environmental clearing;
- the area has been unlawfully cleared as defined in the VMA;
- the area is subject to a Restoration Notice or Enforcement Notice PMAV;
- the area is not remnant vegetation or HVR due to burning, flooding or natural causes;
- clearing occurred after 29 November 2013 and was not lawfully carried out.

If you can demonstrate that circumstances mentioned in section 20CA of the VMA are not relevant, then the department may make the area a category X area.

A detailed overview of the definitions and legislative provisions relating to HVR can be found in Appendix 1.

2. Mapping of high value regrowth

The Regulated Vegetation Management Mapping (RVMM) is updated monthly to incorporate PMAVs that have been made.

Annual RVMM updates are made to ensure vegetation mapping is current and based on the best available data. This annual update process may incorporate updated HVR mapping to areas not subject to a PMAV.

A category C area will generally contain non-remnant forms of regional ecosystems. The criteria for determining category C areas are therefore different to that used for determining remnant regional ecosystems.

For details of this process refer to Queensland Herbarium's Mapping Methodology.

Non-woody regional ecosystems (grasslands)

Regional ecosystems dominated by non-woody vegetation (or grassland regional ecosystems) cannot be mapped as category C areas, they can only be classified category B or category X areas. This is because the Queensland Herbarium uses different rules to map woody dominated regional ecosystems which are outlined in Queensland Herbarium's Mapping Methodology. **Therefore, the assessment of high value regrowth in this guideline only applies to woody dominated regional ecosystems**.

For completeness, a section has been included in appendix 3 of this guide to provide guidance on how non-woody dominated regional ecosystems should be considered when assessing PMAV applications.

3. Assessment of high value regrowth

In assessing a PMAV application to modify a category C area, the department uses the following four-step process that is derived from the definition of HVR in the VMA. See the process in figure 1 below.

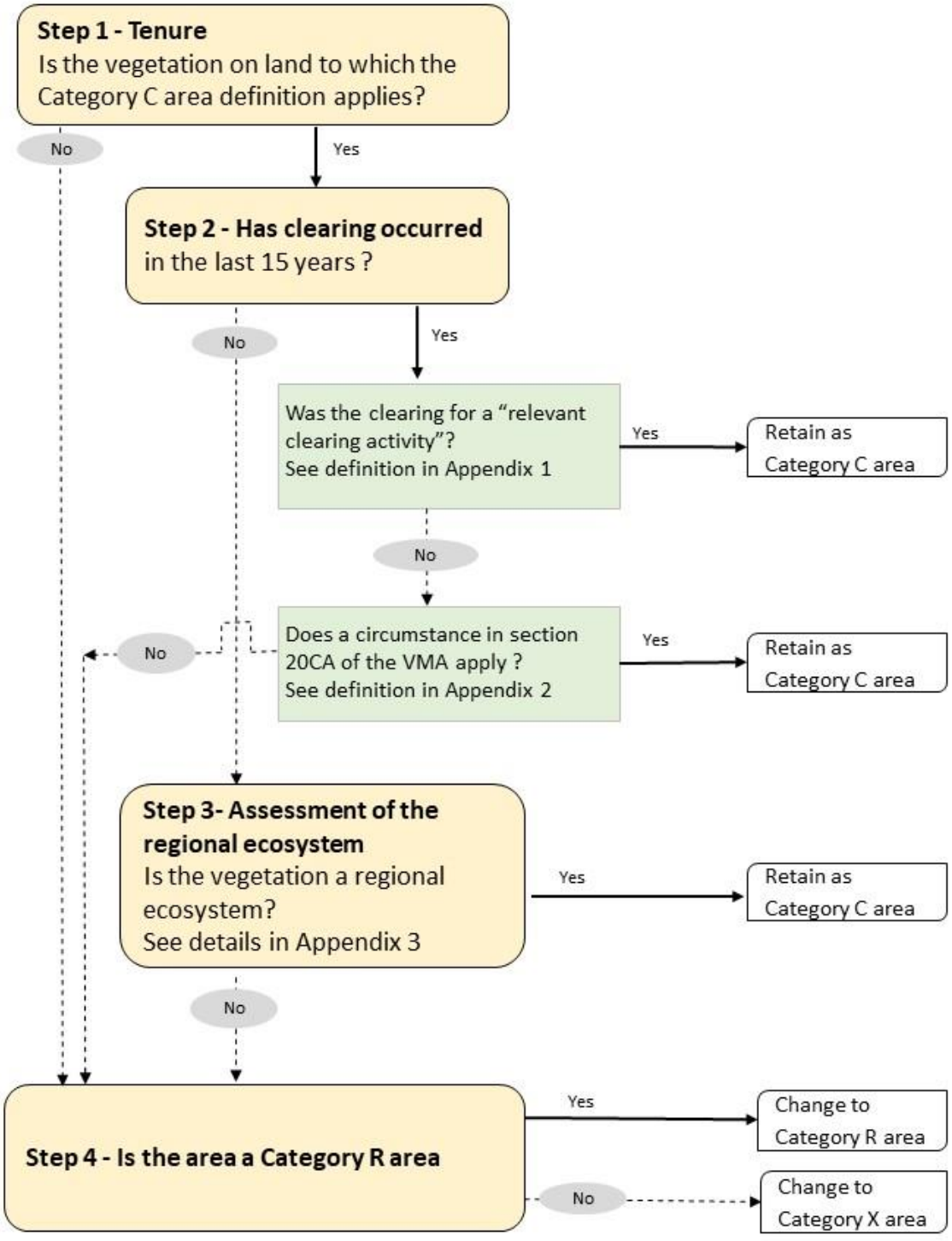

Figure 1: Process for assessing a PMAV application to modify a category C area

3.1 Step 1- Assessment of land tenure

The VMA specifies that HVR can only be mapped as a category C area on particular land tenures.

The applicable tenures are:

- freehold land
- indigenous land
- land subject of a lease issued under the *Land Act 1994* for agriculture or grazing purposes
- an occupation licence under the *Land Act 1994*.

Where a category C area is mapped on other tenures, you can request to have it removed as part of your PMAV application.

3.2 Step 2 - Has clearing occurred

To be mapped as a category C area, the vegetation must be “in an area that has not been cleared (other than for relevant clearing activities) for at least 15 years”. Evidence will need to be provided for this step of the process to show:

- whether clearing has occurred in the application area
- when the stated clearing occurred, and
- whether the purpose of clearing was for a relevant clearing activity.

The 15 year time period is measured from the date of the last major mapping update to the RVMM.

If clearing has occurred in the area, evidence will need to be provided that shows the nature, timing and extent of any clearing to support the PMAV application. Evidence might be in the form of:

- date-stamped photos
- GPS referenced landholder records
- contractor records/receipts or similar.

In assessing PMAV applications, departmental officers will use the available library of aerial, satellite or high-resolution imagery for verification purposes to confirm if/when/where clearing has occurred. The applicant may be requested to provide further information or departmental staff may undertake a field visit where imagery does not provide sufficient evidence.

The area will not be amended in either of the following circumstances:-

1. Clearing took place for a ‘relevant clearing activity’.
2. Section 20CA of the VMA applies (See section 1 of this guideline).

Category C areas mapped since March 2018)

An area that has been mapped as a category C area (i.e. since 2018), will generally have previously been a category X area on the RVMM . The ‘relevant clearing activity’ requirement is not based on whether an ADVCC notification or an area management plan (AMP) notification was made, as the ADVCCs and AMPs would not have applied to category X areas. However, if the purpose of the clearing is determined to have been a relevant clearing activity the area will not be made category X area.

Category C areas mapped before March 2018

This will differ in the circumstance of an area that was mapped as a category C area before March 2018. Clearing in these areas would need to have complied with an ADVCC, an AMP or, in some cases on leasehold land, a development approval. It will be necessary to provide evidence to show that a notification was made under an ADVCC, an AMP or development approval. Notifications made under ADVCCs and AMPs are shown on the department's website.

If the assessment determines that lawful clearing has occurred within the previous 15 years (other than for relevant clearing activities) and the area would not meet the requirement to be mapped as a category R area then an offer of a PMAV to convert the area to a category X area may be made.

3.3 Step 3 – Assessment of the regional ecosystem

To be mapped as a category C area, the vegetation must meet the definition of an endangered regional ecosystem, of concern regional ecosystem or least concern regional ecosystem.

Appendix 3 outlines documentation to assist applicants in providing the information to support a PMAV application for determining whether vegetation is a regional ecosystem by:-

- determining the vegetation structure category for that regional ecosystem
- providing guidance on completing a transect
- using transects to record the native woody vegetation along the transect to determine the regional ecosystem at that location
- using a transect to record the crown cover of the native woody vegetation at that location
- determining whether the vegetation at that location is a regional ecosystem by comparing the recorded crown cover against the "Vegetation Structure and Minimum Crown Cover Requirements" shown in Table 2.

The confirmation of the particular regional ecosystem that occurs at that location will involve site inspections and evidence collection by the applicant, including the following steps:

- determine what the area subject to the PMAV application is currently mapped as (i.e. which regional ecosystem or other regional ecosystems are expected to occur within the area)
- determine the number of sites that will need to be sampled, consistent with Table 1 (sample frequency) at a minimum
- check imagery to determine site locations
- obtain a regional ecosystem technical description for the mapped regional ecosystem in that location, as well as other regional ecosystems likely to be in the area, or where unavailable, the long description from the Vegetation Management Regional Ecosystem Description Database (VM REDD), links provided below
- determine the vegetation structure category for these regional ecosystems from the regional ecosystem technical description, or where unavailable, the long description from the VM REDD
- supply additional information to assist with the identification of the native species characteristic of these regional ecosystems.

Considerations for site sampling and site selection are discussed in Appendix 3 below.

Regional ecosystem long descriptions can be obtained from the VM REDD by using the following link: https://www.qld.gov.au/environment/land/management/vegetation/maps/regional-ecosystems-lookup

Regional ecosystem technical descriptions can be obtained (where available) by using the following link: https://publications.qld.gov.au/dataset/re-technical-descriptions

There are a range of scenarios that the assessment will consider as a possible outcome of Step 3. These may include the following:-

- The ecologically dominant layer is dominated by non-native species. The area may be determined not to be a regional ecosystem because (part or all) of the crown cover is dominated by non-native species to the extent that is inconsistent with Queensland Herbarium's Mapping Methodology. In such a case, the result may be the offer of a PMAV to show the area as a category R area or a category X area.
- The crown cover not meeting the minimum percentage cover. If the part or all of the area does not meet the minimum percentage cover requirement for the assigned vegetation structure category as outlined in Queensland Herbarium's Mapping Methodology, and the area does not meet the requirements of a category R area , , then that area may be made a category X area.
- The ecologically dominant layer is dominated by pioneer species (i.e. species that are first to dominate an area that has been disturbed). There may also be the situation (addressed in Queensland Herbarium's Mapping Methodology) that a native pioneer species (e.g. acacia species) dominates the regrowth after any prior disturbance such that the full range of species expected to be represented in the regional ecosystem 'long description' are not present. In such instances, the area should be retained as HVR if it meets the requirements in Queensland Herbarium's Mapping Methodology.

3.4 Step 4 - Is the area a category R area

The final consideration to be made before a category C area is converted to a category X area is to verify whether the area is otherwise a category R area, being an area located within 50m of a watercourse in the Great Barrier Reef catchments.

If the area meets the definition of a category R area it cannot be converted to a category X area.

Legislation

Vegetation Management Act 1999

Related documents

- Internal review application form. Internal Review form (resources.qld.gov.au)

References

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Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F, Addicott,

E.P. and Appelman, C.N. *Methodology for surveying and mapping of regional ecosystems and vegetation communities in Queensland.* Queensland Herbarium, Queensland Department of Environment and Science, Brisbane. Latest version available at: Survey and mapping ecosystems | Environment, land and water | Queensland Government (www.qld.gov.au)

Appendix 1 – Key legislative and policy provisions as defined in the *Vegetation Management Act 1999*

Purpose of the Act - The VMA states:

The purpose of this Act is to regulate the clearing of vegetation in a way that—

a) Conserves remnant vegetation that is—

i. an endangered regional ecosystem; or,

ii. an of concern regional ecosystem; or

iii. a least concern regional ecosystem; and

b) conserves vegetation in declared areas; and

c) ensures the clearing does not cause land degradation; and

d) prevents the loss of biodiversity; and

e) maintains ecological processes; and

f) manages the environmental effects of the clearing to achieve the matters mentioned in paragraphs (a) to (e); and

g) reduces greenhouse gas emissions; and

h) allows for sustainable land use.

The purpose is achieved mainly by providing for [among other things]—

e) the regulation of particular regrowth vegetation.

Category C area – is an area, other than a category A area, category B area, category R area or category X area, shown on the regulated vegetation management map as a category C area that—

a) contains high value regrowth; or

b) the chief executive decides to show on the regulated vegetation management map as a category C area.

Clear for vegetation–

(a) means remove, cut down, ringbark, push over, poison or destroy in any way by burning, flooding or draining; but

(b) does not include destroying standing vegetation by stock or lopping a tree.

Endangered regional ecosystem means a regional ecosystem declared to be an endangered regional ecosystem under section 22LA.

Section 22LA states:

1. Each regional ecosystem identified in the VM REDD as an endangered regional ecosystem is an endangered regional ecosystem.

2. The VM REDD may identify a regional ecosystem as an endangered regional ecosystem only if the Minister is satisfied—

    a. the area of remnant vegetation for the regional ecosystem is less than 10% of the pre-clearing extent of the regional ecosystem; or

    b. the area of remnant vegetation for the regional ecosystem is—

        i. 10% to 30% of the pre-clearing extent of the regional ecosystem; and

        ii. Less than 10, 000 ha.

High value regrowth vegetation means vegetation located—

a) on freehold land, indigenous land, or land subject of a lease issued under the *Land Act 1994* for agriculture or grazing purposes or an occupation licence under that Act; and

b) in an area that has not been cleared (other than for relevant clearing activities) for at least 15 years, if the area is—

    i. an endangered regional ecosystem; or

    ii. an of concern regional ecosystem; or

    iii. a least concern regional ecosystem.

Least concern regional ecosystem means a regional ecosystem declared to be a least concern regional ecosystem under section 22LC.

Section 22LC states:

1. Each regional ecosystem identified in the VM REDD as a least concern regional ecosystem is a least concern regional ecosystem.
2. The VM REDD may identify a regional ecosystem as a least concern regional ecosystem only if the Minister is satisfied the area of remnant vegetation for the regional ecosystem is—

    a. more than 30% of the pr-clearing extent of the regional ecosystem; and

    b. more than 10, 000ha.

Of concern regional ecosystem means a regional ecosystem declared to be an of concern regional ecosystem under section 22LB.

Section 22LB states:

1. Each regional ecosystem identified in the VM REDD as an of concern regional ecosystem is an of concern regional ecosystem.
2. The VM REDD may identify a regional ecosystem as an of concern regional ecosystem only if the Minister is satisfied—

    a. the area of remnant vegetation for the regional ecosystem is less than 10% to 30% of the pre-clearing extent of the regional ecosystem; or

    b. the area of remnant vegetation for the regional ecosystem is—

        i. more than 30% of the pre-clearing extent of the regional ecosystem; and

        ii. Less than 10, 000 ha.

Relevant clearing activities means—

a) fodder harvesting; or

b) managing thickened vegetation; or

c) clearing of encroachment; or

d) controlling non-native plants or declared pests; or

e) necessary environmental clearing; or

f) managing, felling and removing trees for an ongoing forestry business.

Regulated regrowth vegetation is vegetation contained in a category C or category R area".

Regrowth vegetation means vegetation that is not remnant vegetation.

Regional ecosystem means a vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil***.***

Remnant vegetation means vegetation—

(a) that is –

I. an endangered regional ecosystem; or

II. an of concern regional ecosystem; or

III. a least concern regional ecosystem; and

(b) forming the predominant canopy of the vegetation –

I. covering more than 50% of the undisturbed predominant canopy; and

II. averaging more than 70% of the vegetation's undisturbed height; and

III. composed of species characteristic of the vegetation's undisturbed predominant canopy.

Vegetation is a native tree or plant other than the following—

a) grass or non-woody herbage;

b) a plant within a grassland regional ecosystem identified in the VM REDD as having a grassland structure;

c) a mangrove.

Appendix 2 – Section 20CA Process before making a PMAV

20CA Process before making PMAV

(1) This section applies if—

(a) an owner of land applies under section 20C for the making of a PMAV for the land or part of the land; and

(b) the owner proposes that the land or part of the land (the relevant area) be a category X area on the PMAV.

(2) The chief executive can not make the relevant area a category X area on the PMAV if any of the circumstances mentioned in section 20AH or 20AI for the area have happened unless the area has later been cleared and—

(a) the clearing was carried out under a moratorium exemption; or

(b) the clearing was carried out under a development approval other than a development approval for—

(i) fodder harvesting; or

(ii) managing thickened vegetation; or

(iii) clearing of encroachment; or

(iv) controlling non-native plants or declared pests; or

(v) necessary environmental clearing; or

(c) the clearing was carried out under an accepted development vegetation clearing code other than for—

(i) conducting a native forest practice; or

(ii) fodder harvesting; or

(iii) clearing of encroachment; or

(iv) controlling non-native plants or declared pests; or

(v) necessary environmental clearing; or

(d) the clearing was carried out under an area management plan other than for—

(i) fodder harvesting; or

(ii) managing thickened vegetation; or

(iii) clearing of encroachment; or

(iv) controlling non-native plants or declared pests; or

(v) necessary environmental clearing; or

(e) the clearing was not carried out under an accepted development vegetation clearing code or an area management plan and, when the clearing was carried out, the clearing did not require a development permit under the Planning Act.

(3) Also, the chief executive can not make the relevant area a category X area on the PMAV if—

(a) the vegetation in the relevant area is not remnant vegetation or high value regrowth vegetation because of clearing that happened because of burning, flooding or natural causes; or

(b)the chief executive is satisfied the clearing of vegetation for the relevant area after 29 November 2013 was not lawfully carried out.

(3A) However, subsection (3) does not prevent the chief executive making the relevant area a category X area on the PMAV if clearing in the area was carried out under subsection (2)(a), (b), (c), (d) or (e) after the clearing mentioned in subsection (3)(a) or (b).

(4) If the chief executive considers the relevant area can not be made a category X area because of subsection (2) or (3), the chief executive must, before making the PMAV, give the owner of the land a notice inviting the owner to show why the relevant area should be a category X area.

(5) The notice must state the following—

(a) the grounds for the proposed decision that the relevant area is not a category X area;

(b) the facts and circumstances forming the basis for the grounds;

(c) the proposed boundaries of the vegetation category areas for the PMAV;

(d) that the owner may make submissions about the proposed decision;

(e) how to make a properly made submission;

(f) where the submission may be made or sent;

(g) a period within which the submission must be made.

(6) The stated period must be at least 15 business days after the notice is given.

(7) If, after considering any properly made submission by the owner, the chief executive still considers the relevant area is not a category X area, the chief executive may make the relevant area other than a category X area on the PMAV.

(8) The chief executive must give the owner an information notice about the decision to make the relevant area other than a category X area.

(9) In this section—

lawfully carried out, for the clearing of vegetation, means the clearing was, at the time of the clearing, authorised or permitted under this Act or under any of the following—

(a) the Planning Act;

(b) the repealed Integrated Planning Act 1997;

(c) the repealed Sustainable Planning Act 2009;

(d) the State Development and Public Works Organisation Act 1971;

(e) the Cape York Peninsula Heritage Act 2007.

properly made submission means a submission that—

(a) is written; and

(b) is signed by each person (a signatory) who made the submission; and

(c) states the name and address of each signatory; and

(d) states the grounds of the submission and the facts and circumstances relied on in support of the grounds; and

(e) is made to the person stated in the notice inviting the submission; and

(f) is received on or before the last day for the making of the submission.

Appendix 3 – Determining Regional Ecosystems

Sampling

It is important that adequate sample sites are used to be able to map similar areas on aerial imagery. Please ensure that the sampling frequency is at least consistent with Table 1 below:

Table 1: Sampling frequency

Assessment polygon size	Minimum number of sample sites
0-20 hectares	1
20-50 hectares	2
50-100 hectares	4
100- 500 hectares	8
500-1000 hectares	10

Source: Queensland Herbarium Mapping Methodology

If the application is to amend mapped areas, evidence should be provided, using transects that provides detailed information about a “representative” sample from that site.

If there are several regional ecosystems and densities of vegetation within the application area, then sufficient information should be provided that demonstrates that each area does or does not meet the requirements to be considered HVR. See “Considerations for re-mapping of HVR” below.

Site Selection

It is important to select sites that are not located in areas of significant disturbance, such as close to fences, vehicular tracks and watering points. Transects will be required in areas that have a level of disturbance from relevant clearing activities or other activities, however applicants should locate transects in areas that are “representative” for that area.

The assessment of the PMAV application will use aerial imagery to consider how representative each of the transect sites is in relation to the vegetation surrounding it. Where it is clear in imagery that the sampled areas are not representative additional information may be requested.

Species Presence Recorded using a Transect

The current Vegetation Management Supporting Map will list the regional ecosystems that are believed to occur at that location based on pre-clear mapping.

Recording the species present is done using a transect. As a transect will be used for the following step, it is reasonable to use a single transect for the collection of both species present and crown cover information.

To conduct a transect to record species present, the process is as follows:

1. Establish the transect in a representative location for that regional ecosystem and density of vegetation.

2. Lay the 100 metre tape measure along the ground and if on a slope, along the contour. If the size and shape of the area or polygon does not allow for a 100 metre transect, it is reasonable to use a 50 metre transect.
3. Take GPS points (GDA2020) at each end of the transect.
4. From each end of the transect, take photographs north, south, east and west, including along the transect, so the representative nature of the site can be confirmed.
5. Use a 2 metre stick to guide distance from the transect. Record all native woody species (mature and immature) within 2 metres either side of the transect in the Species Present section of the High Value Regrowth Assessment Form.
6. If representatives of other native woody species located outside the transect, but within the application area, are helpful for identification of the regional ecosystem, they can be recorded as well. For transparency please use the notes section on the assessment form to record that they were present but were outside the transect. Please provide geo-referenced photographs. Please note that the assessment considers the presence of native woody species only. If non-native species are present, they can be recorded in the notes section of the High Value Regrowth Assessment Form, but they will not be included in the crown cover assessment.
7. Compare the results of the species present record with the regional ecosystem technical descriptions of the likely regional ecosystems to occur in that area. This will determine the "best fit" regional ecosystem for that location. Use the VM REDD long descriptions if technical descriptions are not available. Consider land zone to assist determination. If there are several options, select the regional ecosystem that is the most likely based on the evidence available.
8. Include all record sheets and geo-referenced photographs in the PMAV Application.

Note

The Census of the Queensland Flora and Fungi, which is updated annually by the Queensland Herbarium, identifies plants considered "Native in Queensland", or "Native and naturalised" for particular bioregions in Queensland. The Census will include non-native plants as either: "Formerly naturalised", "Doubtfully naturalised" or "Naturalised in Queensland". Plants that are "Native and naturalised" for particular bioregions in Queensland, are non-native for the remaining bioregions. Further information can be found on the Queensland Government website at www.qld.gov.au (search for 'flora and fungi census'). Also, a fact sheet on determining what is native vegetation can be found here

Determination of Regional Ecosystems

Using the steps above, collect evidence on-ground that confirms the regional ecosystem.

In situations where the vegetation has not developed to a point where a clear determination can be made, consider all of the evidence available and make a determination. In difficult cases, it may be possible to seek expert opinion from the Queensland Herbarium.

Once there is determination of a regional ecosystem for that location, note its vegetation structure category. This will be different depending on if the regional ecosystem is woody dominated (dense, mid-dense, sparse or very sparse) or non-woody dominated (grassland). Woody and non-woody dominated regional ecosystems have different considerations and are outlined in the steps below.

Woody dominated regional ecosystems

Crown Cover Assessment

This step involves using a transect, and the line intercept method, to record the representative crown cover of native woody species in that area.

The assessment will determine whether the crown cover of the regrowth vegetation meets the requirement to be considered high value regrowth.

Note that this may record native woody vegetation that is mature as well as immature.

Crown Cover Assessment using a Transect

To conduct a transect to record crown cover, the process is exactly the same as the process shown in the above “Species Presence Recorded using a Transect” section for points 1 to 4, so the guidance below starts as point 5 where the differences start with the guidance for recording crown cover.

1. Use the Line intercept form from the Queensland Herbarium Mapping Methodology to record the points at which native woody plants cross (intersect) the transect tape (see Diagram 1 below). Only record the crown cover for native woody species and do not record the crown cover for weeds and non-native species.
2. Add up the distances over which the crowns of native woody vegetation covers the transect (see tip below). Calculate a total crown cover distance over the transect.
3. Compare against the relevant Vegetation Structure Category structure in Table 2 (below) for that regional ecosystem. Example: regional ecosystem 5.3.14 is a mid-dense regional ecosystem, so use the Minimum Crown Cover Percentage Required figures in column 3 of Table 2 (25%).

Note

Where the crowns of 2 native woody plants overlap over the transect line, record the total intersect (cover) of the two plants as a combined figure, rather than record the crown cover of both plants separately, as recording them separately will inflate the crown cover figure above what it should be.

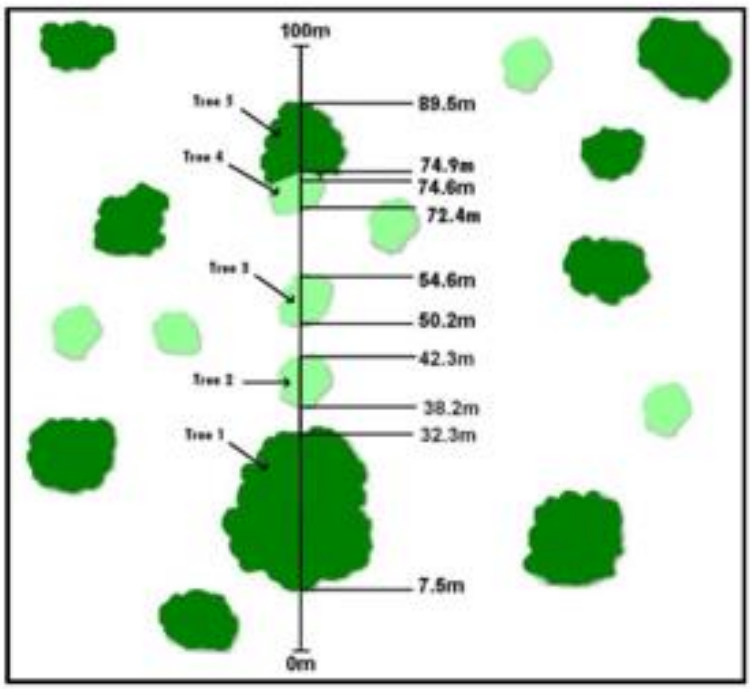

Diagram 1: Line intercept method. Source: Eyre et al., 2015

Table 2: Vegetation Structure and Minimum Crown Cover Requirements

Vegetation Structure Category	Percentage of Crown Cover Representative of that Vegetation Structure Category	Minimum Crown Cover Percentage Required	Guidance for Assessment
Very sparse	<20%	5%	Category R or X area if the crown cover falls below 5%.
Sparse	20-50%	10%	Category R or X area if the crown cover falls below 10%.
Mid-dense	50-80%	25%	Category R or X area if the crown cover falls below 25%.
Dense	80-100%	40%	Category R or X area if the crown cover falls below 40%.

Source: Adapted from the Queensland Herbarium Mapping Methodology

If the crown cover of native woody species recorded through the transect is equal to or greater than the Minimum Crown Cover Percentage Required for that regional ecosystem, then the vegetation will be considered as a regional ecosystem and should be retained as HVR.

For example, regional ecosystem 5.3.14 has a mid-dense structure category. If a transect finds that more than 25 metres (i.e. 25%) of the transect tape is covered by woody native species then the vegetation meets the crown cover requirement to be a regional ecosystem and thus HVR.

Further Considerations for Assessment

This section provides guidance on considerations for collecting evidence, and considerations for site selection and transect placement.

Representativeness

Transects are used to confirm details about the vegetation in an area, collecting information such as species and crown cover, within a sample area. The results of this sample can then be extrapolated over larger similar areas. It is therefore important to ensure that the area sampled by the transect is representative of the vegetation within that polygon (i.e. the transect is collecting detailed species and crown cover for a particular sample that can then be used to assess broader areas using imagery without further on-ground assessment).

Where the following circumstances occur, the applicant may be required to provide further information:

- It is very clear through imagery when a transect has been placed in a particular location to minimise canopy cover.
- Example 2 below shows a transect across a thin strip of vegetation associated with a watercourse, with much clearer areas either side. This transect indicates that the canopy cover falls below the threshold to be considered HVR, but this is due to poor placement of the transect through areas that are significantly different. There should be one transect

placed within the thicker vegetation along the watercourse to collect detailed information about an area that is representative of the thicker vegetation. Another transect should be conducted in the thinner areas either side of the watercourse vegetation to collect detailed information relating to a representative site within the thinner areas. If the thinner areas are completely clear of native woody vegetation or contain a density that is clearly below the Minimum Crown Cover Requirements for that regional ecosystem, a transect is not required and photographs will suffice.

Example 2: Incorrect placement of transect

Variation within Regional Ecosystems

Be aware that many regional ecosystems do have sub-types that occur in particular situations, such as gullies. In addition, aspect (direction in relation to the sun) can have a significant impact on density and appearance of a regional ecosystem. This natural variation within the regional ecosystem is a result of aspect and does not indicate that the north facing areas are likely to have been cleared in the past. Any application to amend the mapping will be subject to the normal assessment process including providing information from transects where required.

Considerations for Re-mapping of HVR

If the assessment determines that there is sufficient evidence to confirm that change is required, re-mapping of areas of vegetation can occur. This section provides guidance for refining the mapping of areas of high value regrowth vegetation.

Considerations for non-woody dominated regional ecosystems (grasslands)

The Queensland Herbarium uses different rules to map non-woody dominated regional ecosystems. Non-woody vegetation is vegetation in which the predominant stratum is composed of grasses and/or other non-woody vegetation. Defining remnant status in non-woody dominated vegetation, such as grasslands, on the characteristics of the height and cover of the canopy—that is, the grasses and forbs—is not practical. The dominant layer in these vegetation types is highly variable according to

seasonal conditions and can be rapidly modified through the use of grazing, fire or mechanical mowing. In addition, variations in the composition and condition of the non-woody vegetation may not be readily and consistently recognised from Landsat TM imagery.

The Queensland Herbarium assesses and maps non-woody dominated regional ecosystems as remnant (or Category B areas) if it meets the definition under section 20 AH(h) of the VMA. That is, if the area is a regional ecosystem that:

(i) has a predominant canopy not dominated by woody vegetation; and

(ii) has not been cultivated for 15 years; and

(iii) contains native species normally found in the regional ecosystem; and

(iv) is not dominated by non-native perennial species;

Assessing the remnant status of non-woody dominated regional ecosystems may require a two-step process. Step 1 is mapping the extent according to time since cultivation, and step 2 is making a site assessment based on the composition of the vegetation. The composition of the vegetation can be assessed using the 'species presence recorded using the transect method' identified earlier in this section. See the Queensland Herbarium Mapping Methodology for more detail.

The following table provides guidance when assessing the RVMM category for areas of non-woody dominated regional ecosystems.

Vegetation Structure Classification	S20AH(h) criteria	Guidance for Assessment
Non-woody dominated vegetation (grassland)	Meets all criteria	Category B area
	Does not meet 1 or more criteria	Category R or X area