

Nature Conservation (Plants) Regulation 2020

Protected Plants Assessment Guidelines

Contents

1	Purpose	1
2	Background	1
3	Issuing a protected plant clearing permit	1
3.1	Assessment process	1
3.1.1	Pre-lodgement advice.....	1
3.1.2	Application requirements	2
3.1.3	Initial assessment of the application.....	2
3.1.4	Assessment of proposed clearing	2
3.2	Impact management.....	3
3.2.1	Impact management plan	3
3.2.2	Offsets	4
3.3	Salvage of plants under clearing permit	4
3.4	Make a determination of the application.....	5
4	Issuing a protected plant harvesting licence	8
4.1	Assessment process	8
4.1.1	Pre-lodgement advice.....	8
4.1.2	Application requirements	8
4.1.3	Initial assessment of the application.....	8
4.1.4	Assessment of proposed harvesting	9
4.2	Information to be included in a sustainable harvest plan.....	9
4.2.1	Ecology and attributes of the target species.....	10
4.2.2	Description of the area to be harvested.....	10
4.2.3	Harvest and land management techniques	11
4.2.4	Ecological sustainability of harvest.....	11
4.3	Application for licence to harvest plants by salvage only	12
4.4	Make a determination of the application.....	13
5	Issuing a protected plant growing licence.....	16
5.1	Assessment process	16
5.1.1	Pre-lodgement advice.....	16
5.1.2	Application requirements	16
5.1.3	Initial assessment of the application.....	17
5.1.4	Assessment of proposed harvest.....	17
5.2	Information to be included in a sustainable harvest plan.....	17
5.2.1	Ecology and attributes of the target species	18
5.2.2	Description of the area to be harvested.....	19
5.2.3	Harvest and land management techniques	19
5.2.4	Ecological sustainability of harvest.....	20
5.3	Make a determination of the application.....	21
6.	Key definitions	25

1 Purpose

This guideline establishes transparent and consistent approaches to administering authorities for clearing and harvesting activities throughout Queensland, and ensures that the implications of taking and using protected plants under these authorities are considered in accordance with the objectives of the *Nature Conservation Act 1992* (the Act).

2 Background

The object of the Act is the conservation of nature and this is to be achieved through the protection of wildlife and its habitat, and the ecological sustainability of any use of protected wildlife. The Queensland Government has adopted a risk-based approach to the regulation of protected plants under the Act. The regulatory framework captures clearing and harvesting activities that pose a significant risk to plant biodiversity. The aim of the protected plants legislative framework under the Act is to ensure the survival of viable populations of protected plants in the wild, particularly threatened species or near threatened species, and to identify and reduce or remove the effects of threatening processes. Protected plants and their habitat are to be conserved to the greatest possible extent.

Clearing and harvesting proposals should only be approved if the taking of plants from the source population will not adversely affect the survival in the wild of the plant species. In particular:

- for threatened species, it will not reduce the ability of a plant population to expand; and
- for near threatened species, it will not affect the ability of a plant population to survive.

For clearing protected plants, the flora survey trigger map will identify if an area to be cleared is within a 'high risk area' (where threatened plants or near threatened plants are known or likely to be present). When a non-exempt clearing activity is proposed within a high risk area, the proponent of that activity is required to complete a flora survey of the 'clearing impact area' (the area to be cleared plus a buffer 100m in width), prior to commencement of clearing. If the flora survey identifies that threatened plants or near threatened plants do not exist within the clearing impact area, the applicant can submit a copy of the flora survey report to the department to be eligible for an exemption from the requirement for a clearing permit. Where threatened plants or near threatened plants are present in the clearing impact area and cannot be avoided, a clearing permit will be required and the application will need to include specific information that will be assessed against this guideline.

For the harvest of protected plants, a protected plant harvesting licence or protected plant growing licence is required for the harvest of threatened plants or near threatened plants or special least concern plants (known collectively as 'restricted plants'). A protected plant harvesting licence allows a person to harvest restricted whole plants or plant parts from the wild, where the harvest is sustainable. A protected plant growing licence allows a person to harvest restricted whole plants and plant parts from the wild, to be used to propagate or cultivate plants only, where the harvest is sustainable.

An application to harvest these plants can only be approved where the applicant can demonstrate the proposed harvest is sustainable, through a sustainable harvest plan. This guideline outlines the criteria required for assessing the suitability of a sustainable harvest plan.

3 Issuing a protected plant clearing permit

3.1 Assessment process

3.1.1 Pre-lodgement advice

Before an application is received, Department of Environment and Science (DES) officers can be consulted to discuss the nature of the proposed clearing and the tenure of the land on which clearing is proposed, and whether the clearing activity triggers flora survey and/or assessment requirements under the Act.

3.1.2 Application requirements

An application to clear threatened plants or near threatened plant species must be accompanied by the following information:

- a copy of the flora survey trigger map relating to the clearing
- a site plan showing the boundaries of the site, significant landscape and hydrology features, existing vegetation and the threatened plant or near threatened plant species to be removed
- for clearing within a high risk area - a flora survey report for the clearing impact area, consistent with the DES Flora Survey Guidelines
- for clearing within an area other than high risk - a document identifying all threatened plants or near threatened plants known to exist within the area to be cleared
- for an application for which the person conducting the flora survey does not meet the specified criteria for a suitably qualified person - a justification of how the person believes they are otherwise suitably qualified to conduct the flora survey
- for an application where an alternative flora survey methodology has been used for the preparation of a flora survey report - a justification of the alternative methodology
- for an application where a reduced buffer zone is proposed - a justification of why it is not reasonably practicable for a flora survey to be undertaken of the entire 100m area
- an impact management plan, developed in accordance with this guideline.

3.1.3 Initial assessment of the application

Incorrect submission of application

In the instance where a protected plant clearing permit application is incorrectly submitted to DES for assessment (i.e. a clearing permit was not necessary), officers should advise the applicant of the error and keep a record of this correspondence on file for future reference. The applicant will also need to provide the department with a written statement withdrawing the application.

3.1.4 Assessment of proposed clearing

In accordance with section 87 of the Nature Conservation (Plants) Regulation 2020, the assessing officer may only grant a protected plant clearing permit for the taking of a protected plant, if the following criteria are met:

- all effort has been made to avoid impacts on protected plants
- where impacts are unavoidable, all effort has been made to minimise damage
- unavoidable impacts must be managed using a suite of impact management measures to ensure a 'no net loss of threatened plants or near threatened plants'. Impact management measures must be detailed in an impact management plan, developed in accordance with the protected plants assessment guideline, and
- the flora survey report for the application complies with the flora survey guidelines or an alternative survey methodology agreed to by the chief executive under section 140 of the Nature Conservation (Plants) Regulation 2020.

3.2 Impact management

Unavoidable impacts on threatened plants or near threatened plants must be managed to conserve species and to ensure the survival of viable populations in the wild. An impact management plan must be included with an application for a protected plant clearing permit, to identify how unavoidable impacts on threatened plants or near threatened plants will be managed. An impact management plan should be accompanied by scientific reports or expert advice (e.g. a suitably qualified person or the Queensland Herbarium) which validate the claim that management of an impact to a species should have a high chance of success.

To ensure the survival of threatened plants or near threatened plants in the wild, assessing officers must determine whether the proposed management, such as translocation, propagation and rehabilitation of habitat, are appropriate for a particular species. Officers may seek advice from the Queensland Herbarium or other expert sources.

3.2.1 Impact management plan

An impact management plan must include the following sections:

- attempts to avoid and minimise impact
- nature of impact
- management of impact
- justification of impact management
- survival of plant in the wild

Information that should be included in each section of the impact management plan is outlined in the relevant sections below.

1. Attempts to avoid and minimise impact

An impact management plan must include a written explanation of the actions taken to avoid and minimise the removal of threatened plant or near threatened plant species, where possible, in accordance with this guideline.

Factors to consider when determining whether clearing of threatened plants or near threatened plant species can be first avoided, and then minimised:

- Can the size and physical capacity of the site accommodate an alternative development site or location?
- Can the size and layout of the proposed development reasonably be modified?
- Are there any surrounding land use restrictions?
- Has the proposal implemented reasonable and practical measures to reduce clearing required during the construction phase?

2. Nature of impact

An impact management plan must also include a description of the nature of the proposed impact on threatened plants or near threatened plants identified in a flora survey. Identifying the nature of the impact will help the applicant determine the most appropriate impact management options and also help assessment officers to assess the scale of the impact and the appropriateness of the proposed impact management plan. The description of the nature of the impact should include the following:

- a spatial representation of the proposed clearing footprint, the clearing impact area if applicable and the location of any plants to be impacted by the clearing directly or indirectly. A threatened plant or near threatened plant is taken to have been directly impacted if it is proposed to be cleared, and indirectly impacted if clearing is proposed to occur within 100m of that plant.
- the extent, number and maturity of threatened plants or near threatened plants that will be impacted by the proposed clearing.
- list of all impacts on threatened plants or near threatened plants or the supporting habitat of threatened plants or near threatened plants.
- identify population density and total population number.
- identify quality of habitat.

3. Management of impact

In accordance with section 87 of the Nature Conservation (Plants) Regulation 2020, impact management for unavoidable impacts is required. Where the applicant is unable to avoid and minimise the removal of threatened plant or near threatened plant species, a detailed written explanation of the actions taken to manage the impact on

the plant is required. The applicant should provide a list of all protected plants that are to be used for impact management.

The proposed impact management should consider the following options:

- translocation of the species
- opportunities for propagation of the species
- opportunities for rehabilitation of the species in a particular area
- site rehabilitation programs, such as erosion control and weed management to promote natural regeneration of protected plant species

If the applicant can demonstrate that clearing within 100m of a threatened plant or near threatened plant will not lead to the death of the plant or compromise its viability in the wild, the applicant must identify the supporting habitat of the threatened plant or near threatened plant. For example, the threatened plant or near threatened plant may be located in a highly disturbed environment within minimal supporting habitat and a flora survey may provide evidence that clearing within 100m of the plant will not impact its survival in that location.

Where impacts on threatened plants or near threatened plants are to be mitigated through proposed rehabilitation of an area or re-planting, the applicant must include information on how they will manage these areas. This may include weed control, watering, replacement planting, propagation initiatives, or quantities of new plants. The applicant should also identify the risks of proposed management actions and how they will account for these to ensure the success of the proposed impact management.

4. Justification of impact management

A supporting statement that demonstrates that the proposed impact management measures are likely to be successful is also required.

The applicant must include the following information as a minimum:

- the expected success rate of impact management
- the limitations or potential threats associated with the impact management, and
- a summary of existing and potential threats to the extent and quality of the vegetation.

5. Survival of plant in the wild

The impact management plan must also include information that demonstrates how the proposed clearing of threatened plant or near threatened plant species will not adversely affect the plants' survival in the wild, and will not reduce the viability of local and regional populations.

3.2.2 Offsets

An offset should be clearly distinguished from other impact management activities. Impact management refers to the range of actions that reduce the level of impacts of clearing on the natural environment, whereas an offset compensates for residual impacts, after impact management requirements of this guideline have been met.

The assessing officer may decide an offset is necessary or desirable for ensuring the viability of one or more species of protected plant and therefore may condition a protected plant clearing permit requiring the applicant to provide an offset.

An offset must be in accordance with the relevant Queensland Government offsets policy, in place at the time of the application.

3.3 Salvage of plants under clearing permit

Any person with a protected plant harvesting licence is able to harvest whole protected plants under a clearing permit, as a contingent salvage activity. The plant can only be taken under contingent salvage if it would otherwise be destroyed by the clearing and is not the subject of a condition of a clearing permit allowing the use of plants for an impact management measure.

In an application for a protected plant clearing permit, an applicant must therefore indicate if it is likely that salvage of whole plants will occur prior to clearing. The applicant's impact management plan must list any protected plants to be used for impact management, in order to identify threatened plants or near threatened plants or special least concern plants that are not intended to be used and may therefore provide an opportunity for salvage.

An applicant must also provide an estimate of any special least concern plants that are intended to be taken under contingent salvage.

3.4 Make a determination of the application

The final step of the assessment process is to make the decision to accept or reject the application. Table 1 should be used as an assessment tool when deciding an application.

Table 1. Factors to consider when granting and conditioning a clearing permit.

Item no.	Item	Requirement	Assessment consideration	Yes/ No
1.	Landholder consent			
	1.1 Landholder consent	Landholder consent received	If the applicant is not the landholder of the land or does not have benefit of an easement over the land this application relates to, the landholder of the land has provided consent for the clearing to occur and that the clearing is for use of the land.	
2	Purpose of clearing			
	2.1 Rationale for clearing activity	State purpose of clearing	The applicant has provided sufficient information to demonstrate the purpose of the clearing activity. Note: In accordance with section 86 of the Nature Conservation (Plants) Regulation 2020, a clearing permit should only be issued for use of the land on which the plants are located.	
3.	Flora survey requirements			
	3.1 Flora survey trigger map	Flora survey trigger map has been checked	The applicant has submitted a copy of the flora survey trigger map to demonstrate the date the map was checked. Note: In accordance with section 139 of the Nature Conservation (Plants) Regulation 2020, before starting any clearing, a person must check the flora survey trigger map to find out if any part of the area to be cleared is in a high risk area.	
4a.	For clearing within a high risk area			
	4.1 Flora survey requirements	Flora survey has been undertaken of the clearing impact area	The applicant has undertaken a flora survey for the clearing impact area in accordance with the flora survey guidelines. Note: If the applicant has undertaken a flora survey using an alternative survey method, the chief executive has agreed to the alternative methodology in accordance with section 140 of the Nature Conservation (Plants) Regulation 2020. Note: If the applicant has undertaken a flora survey with a reduced buffer zone, the chief executive has agreed to the reduced buffer zone in accordance with section 134 of the Nature Conservation (Plants) Regulation 2020.	
		Survey conducted by suitably qualified person	The flora survey was undertaken by a person with professional qualifications or formal training in plant identification and the taxonomy of Australian flora, and was undertaken by a person with a minimum of five years' experience in undertaking surveys for threatened plant or near threatened plant species, particularly in the climatic region being surveyed. Note: If the person conducting the flora survey does not meet the specified criteria for a suitably qualified person, the person has provided a justification of how they believe they are otherwise suitably qualified to conduct the flora survey.	

		Timing of survey	The flora survey was undertaken at an appropriate time where there was the highest possible chance of detecting threatened plant or near threatened plant species or if this has not been possible, the flora survey report provides a justification of timing of the survey and how threatened plants or near threatened plants were detected.	
		Presence and absence of threatened plant or near threatened plantspecies identified	Presence and absence of threatened plant or near threatened plant species has been identified. Where there is a record for a species in WildNet, if this species was not identified in the flora survey, the applicant has provided evidence to justify the absence of this species, through for example, appropriate timing of surveys and evidence of absence of appropriate habitat for the species in the survey area.	
		Timed meander survey	The flora survey has provided identification of the different habitat types in the area. The flora survey has identified the appropriate number of timed meander surveys to be conducted within each of the different habitat types or vegetation communities identified. Multiple timed meander surveys per habitat type have been undertaken where certain habitat types may be extensively represented within a site. Where an threatened plant or near threatened plant population was found to be too dense for this to be practical, the density of the overall population has been estimated by a quadrat survey.	
		threatened plant or near threatened plant population survey	Where threatened plant or near threatened plant species were recorded from a meander search, the flora survey included an threatened plant or near threatened plant population survey to determine the extent and density of the population, and the total number of individuals comprising the threatened plant or near threatened plant population was recorded.	
		Quadrat survey	The preferred standard quadrat size (measuring 50m by 10m) for determining vegetation structure and plant community composition was used. If an alternative quadrat size was used, the report provides justification that it was appropriate for a particular species or habitat, in accordance with the flora survey guidelines.	
		Other methods	In circumstances where a method has been modified or adapted from methods listed in the flora survey guidelines for a particular target species and habitat, a statement has been included to justify that the methodology undertaken was appropriate for the species and habitat.	
	4.2 Flora survey report	Flora survey report requirements	The applicant submitted a flora survey report including all items listed under the reporting requirements of the flora survey guidelines. This includes: a) a list of all threatened plant or near threatened plant species identified within the clearing impact area b) a statement to justify the suitability and qualifications of the person undertaking the flora survey c) curricula vitae for the survey team undertaking the florasurey d) a justification of the timing of the flora survey and detail of any limitations and assumptions associated with the timing of the survey. e) a GIS shapefile of the area to be cleared. f) a map or plan of the clearing impact area. g) a map or plan of the proposed land use requiring the area to be cleared. (e.g. development plans). h) a description of the location. i) the date or dates the clearing is expected to occur.	

4b.	For clearing within an area other than high risk			
	4.1 threatened plant or near threatened plant species presence	Presence of threatened plants or near threatened plants identified	The applicant has provided a report or list of all threatened plants or near threatened plants known to exist within the area to be cleared. Note: In accordance with sections 46 and 47 of the Nature Conservation (Plants) Regulation 2020, a clearing permit is only required for threatened plants or near threatened plants known to exist within the area to be cleared.	
5.	Impact management plan			
	5.1 Plan	Impact management plan has been submitted	The applicant has submitted an impact management plan with the permit application that includes the following required sections: a) avoid and minimise clearing b) the nature of the impact c) the proposed management of impacts d) the justification for proposed management of impacts, and e) evidence of the plant's survival in the wild.	
	5.2 Impact management strategies	Avoid and minimise clearing	The applicant has provided evidence that alternative options were thoroughly considered:	
		Nature of the impact	a) the applicant has identified the amount of clearing (in area), number of particular species to be taken, and the conservation status of the species b) information has been provided on the population dynamics of the species c) information has been provided about the ecology of the species d) the importance of the cleared plants and the habitat they provide has been evaluated, including an assessment of the impact the activity will have on the populations of threatened species e) the applicant has accounted for all impacts on threatened plants or near threatened plants, where the threatened plant or near threatened plant is cleared, or where there is clearing within 100m of the plant.	
		Management of impact	a) the applicant has listed appropriate impact management solutions to account for all threatened plant or near threatened plant species identified in a flora survey report (for clearing within a high risk area) or all threatened plant or near threatened plant species known to be present (for clearing within an area other than high risk) b) the applicant has provided a list of all plants to be used in impact management c) the proposed impact management plan is consistent with section 87 of the Nature Conservation (Plants) Regulation 2020 d) If an applicant has demonstrated that clearing can occur within 100m of an threatened plant or near threatened plant without causing an impact—sufficient evidence is to be provided to demonstrate that no impact to the threatened plant or near threatened plant will occur by clearing its supporting habitat.	
		Justification	a) advice was obtained from a suitably qualified person on the species for any impact management strategy b) the applicant has listed the expected success rate of the proposed impact management and identified any serious limitations or potential threats associated with the impact management c) the applicant has identified how limitations or threats to the success of impact management will be overcome.	

		Survival of plant in the wild	<p>The applicant has demonstrated how the proposed impact management will ensure the plant's survival in the wild.</p> <p>Note: A proposal must not be accepted if the taking will adversely affect the survival of a protected plant species in the wild. In particular, a clearing permit for the taking of endangered and vulnerable plants may be granted only if the taking will not reduce the ability of populations of the plant to expand.</p> <p>Officers should make all efforts to investigate the impacts of the proposed clearing on a local level and also the impact of the taking at a landscape level. The decision regarding the impact to plant species in the wild must be made without consideration of any proposed mitigation including revegetation and translocation.</p>	
--	--	-------------------------------	---	--

Summary of officer assessment

In summary, officers should:

- seek advice from the Queensland Herbarium
- where necessary seek advice from anyone else with specific taxonomic or ecological knowledge of the species proposed to be cleared or likely to be affected by the clearing (for example, Threatened Species Unit, wildlife/resource rangers or the author of a journal article on the species), and
- condition clearing permits accordingly to include:
 - standard clearing conditions
 - conditions to manage impacts of clearing, and
 - where relevant, offset obligations to achieve a no net loss in conservation outcome, and
 - a requirement for the applicant to notify the department at the commencement of clearing.

4 Issuing a protected plant harvesting licence

4.1 Assessment process

4.1.1 Pre-lodgement advice

Before an application is received, Department of Environment and Science (DES) officers can be consulted to discuss the nature of the proposed harvesting activity and whether it is triggered for assessment.

4.1.2 Application requirements

An application for a protected plant harvesting licence must include the following information:

- a list of all restricted plants to be harvested (included within the application form)
- a spatial representation of where harvest is proposed to be undertaken, identifying correct tenure e.g. private land, crown land
- where applicable, a sustainable harvest plan describing how the proposed harvest is ecologically sustainable or provides a conservation benefit to the target species.

An application may also include other documents including maps containing information necessary to support the application.

4.1.3 Initial assessment of the application

Incorrect submission of application

In the instance where a protected plant harvesting licence application is incorrectly submitted to DES for assessment (i.e. a harvesting licence was not necessary), officers should advise the applicant of the error and keep a record of this correspondence on file for future reference. The applicant will also need to provide the department with a written statement withdrawing the application.

4.1.4 Assessment of proposed harvesting

General assessment

In accordance with section 78 of the Nature Conservation (Plants) Regulation 2020, a protected plant harvesting licence will only be issued in the following circumstances:

- the applicant is the landholder of the land or has the written approval of the landholder where plants are to be taken
- the taking is ecologically sustainable and will not adversely affect the survival in the wild of the target species, and
- the taking complies with this guideline.

Under section 78 of the Nature Conservation (Plants) Regulation 2020, this requirement does not apply if the harvest application is for the harvest of whole restricted plants to be taken under contingent salvage only. For the purpose of research, education or conservation, the chief executive may also grant a protected plant harvesting licence for a restricted plant that has not been adequately identified.

Sustainability assessment

Under section 78 of the Nature Conservation (Plants) Regulation 2020, a protected plant harvesting licence will only be issued if the harvest of a restricted plant species is ecologically sustainable and will not adversely affect the species' survival in the wild. This means that the harvest provides a conservation benefit for the species to be taken or that the harvest of the species in a particular location is ecologically sustainable. All applications for a protected plant harvesting licence must include a sustainable harvest plan except in circumstances as outlined below.

Generally, a more detailed plan should be submitted if the harvest relates to whole plants. For harvest of plant parts, the applicant should include all relevant, available information in the sustainable harvest plan; however it is accepted that some information suggested for a sustainable harvest plan, will not be practical.

The assessing officer must not grant a protected plant harvesting licence until the proposed sustainable harvest plan has been approved.

When a sustainable harvest plan is not required

The holder of a protected plant harvesting licence may harvest a whole restricted plant that is to be taken under contingent salvage, as defined under the Nature Conservation (Plants) Regulation 2020. A person may therefore apply for a protected plant harvesting licence solely for harvesting whole restricted plants under contingent salvage.

In accordance with section 78 of the Nature Conservation (Plants) Regulation 2020, a sustainable harvest plan is not required for the harvest restricted plants that are to be taken under contingent salvage.

4.2 Information to be included in a sustainable harvest plan

In accordance with section 97 of the Nature Conservation (Plants) Regulation 2020, the sustainable harvest plan needs to include sufficient information to allow an assessment officer to make a determination about whether the proposed harvest is ecologically sustainable or provides a conservation benefit to the target species.

To meet the requirements of the Act, a sustainable harvest plan must demonstrate that:

- the proposed level of harvest:
 - is ecologically sustainable, or
 - provides a benefit for the conservation of the target species.
- the harvest of the target species will not:
 - reduce the ability of an endangered or vulnerable plant population to expand, or
 - affect the ability of a near threatened or special least concern plant population to survive.
- the harvest from a population of a target species must demonstrate that:
 - does not reduce the capacity of the habitat to support the species
 - minimises disruption to the population from which the individuals are taken, and
 - does not threaten the species' viability or genetic integrity, or threaten restricted or localised populations.

To meet these requirements, the harvest plan would generally include at a minimum, information about: (a) the ecology and local attributes of the target species; (b) the characteristics of the area to be harvested; (c) how the harvest will be conducted and the harvest area managed; and (d) how the proposed harvest and management is ecologically sustainable and/or provides a conservation benefit.

4.2.1 Ecology and attributes of the target species

Ecological information about the target species is useful for determining the sensitivity of the species to disturbance. In particular the physiological and biological characteristics of plant species provide an indication of how well a target species may be able to recover from the harvest regime proposed. Information on key features outlined in Table 2 should be considered for inclusion in the sustainable harvest plan.

Table 2. Species ecology and attribute information required in sustainable harvest plan.

Key feature	Information
Species distribution and abundance	<ul style="list-style-type: none"> <input type="checkbox"/> state, regional and site level <input type="checkbox"/> number of populations • distribution—contiguous or fragmented populations.
Reproductive strategies	<ul style="list-style-type: none"> • type—asexual/vegetative regeneration (rhizomes, bulbs, runners etc.) or sexual reproduction • frequency (i.e. continuous regeneration or annual flowering event) • Seed banking ability—persistence and dispersal potential (i.e. widely or closely to originating plant) • reproductive and germination requirements or triggers (e.g. fire inundation, extended dry period, disturbance).
Lifecycle	<ul style="list-style-type: none"> • growth rates—rapid or slow <input type="checkbox"/> Maturity (e.g. reproductive age within several years or over a decade) <input type="checkbox"/> life expectancy (i.e. short/long lived) <input type="checkbox"/> annual or perennial species <input type="checkbox"/> seasonal or climatic dependencies (e.g. periodic inundation).
Habitat requirements	<ul style="list-style-type: none"> • substrate and vegetation community preferences – non-specific or limited range • environmental preferences (e.g. hardy and tolerates most conditions, or very sensitive and does not tolerate change, or has particular preferences or requirements such as well drained soil, seasonally wet areas, hill tops or drainage lines etc.) • symbiotic/parasitic associations.
Attributes of the target species	<ul style="list-style-type: none"> • age classes (e.g. array of classes or single cohort) • size and maturity • distribution, density and abundance • size and extent of the population/s.

4.2.2 Description of the area to be harvested

Information about the proposed harvest area may be used to evaluate the general ecological health of the site and how it will respond to harvest and disturbance. A description of the area to be harvested should be provided in a sustainable harvest plan to give the best indication of how a site will respond to a harvest activity—for example, the site (including habitat) resilience, or if the site is susceptible to damage and potential degradation over time. Generally, a more detailed description should be provided for the harvest of whole plants. The description of the area to be harvested may include the following information.

- size of the area where harvest is proposed
- particular landscape features of the proposed harvest site (e.g. depressions, channels, hillside, hilltop, slopes and any gradients)
- presence of bogs, marshes or wet areas (seasonal or permanent) that may support or provide habitat for the target species or increase the potential for the site to be easily damaged mechanically
- soil characteristics (e.g. sodic, clay, sandy) and risks of erosion or sediment loss

- vegetation type/s or community (e.g. grassland, open woodland, vine thicket, tropical rainforest, riparian)
- any significant or sensitive habitats.
- any significant or sensitive non-target plant or animal species, including those that may be placed at risk by the proposed harvest
- presence of weeds or invasive plants or attributes that may make the site prone to weed invasion
- presence of pests or diseases (e.g. *Phytophthora cinnamomi*) or attributes that may make the site susceptible to pests or diseases
- any recent disturbance or stresses (e.g. drought, fire or flood)
- current and intended land management and land use practices (e.g. grazing, regular burns or recreational activities)
- overall health and other general features of the site (e.g. highly disturbed, young regrowth, grazed grassland, improved pasture, mature vegetation or remnant vegetation community).

4.2.3 Harvest and land management techniques

Details about how the proposed harvest will be undertaken and how the proposed harvest site will be managed are key components of the sustainable harvest plan. They will be used to help demonstrate how the proposed harvest will be undertaken to address the particular traits of the harvest site and target species to ensure that the proposed harvest is ecologically sustainable. The proposed harvest and land management techniques should address and be appropriate to the ecology of the target species and characteristics of the proposed harvest site using the information outlined in sections 4.2.1 and 4.2.2. Information on the following should, at a minimum, be included in the sustainable harvest plan:

Harvest management

Proposed harvest techniques and strategies, including:

- quantity of whole plants or plant parts to be harvested
- age and size of plants to be harvested (e.g. particular age or size, or the range of ages or sizes)
- where plants will be harvested from (e.g. spread across the harvest site/population extent)
- timing of harvest (e.g. particular time of year, season, duration of harvest, after reproduction or seed shed, rotations or staged over a number of years or locations)
- method of harvest (i.e. how harvest will be done, harvested species accessed and removed from site) (e.g. hand tools, removal of soil, diggers or excavation equipment, cranes, existing or new tracks).

Land management

Proposed land management techniques and strategies (where relevant to the target species and site), including:

- fire regime (e.g. the frequency, timing and intensity of controlled burns or exclusion of fire, reduction of hazardous fuel loads)
- tracks for access and removal (e.g. utilisation of existing tracks, establishment of new tracks)
- weed control and weed risk management techniques (e.g. wash down of tyres, removal of existing weeds)
- disease control or risk management techniques (e.g. sterilisation of equipment, checks for signs of disease)
- erosion or sediment control or risk management techniques (e.g. holes filled with soil from the site, soil retained on site, contour banks)
- other land use and management strategies or plans (e.g. changed grazing regime, stocking intensity or introduction or exclusion of stock, site rehabilitation and revegetation).

Harvest and land management of sandalwood

Where the harvest activity involves the take of whole sandalwood plants, the applicant should follow the techniques listed in schedule 12 of the Code of practice for native forest timber production on State lands, available through the Queensland Government Department of Agriculture and Fisheries (DAF) website.

The harvest of a sandalwood plant may also require an authority from DAF, under the *Forestry Act 1959*. An approval under the *Forestry Act 1959* is required prior to the approval of a protected plant harvesting licence.

4.2.4 Ecological sustainability of harvest

The harvest regime should be designed to minimise the impact on a target species' population, particularly avoiding potential population declines at the site and regional levels. As a general principle, sustainable harvest of a plant does not involve the substantial take of whole or parts of restricted plant species from a particular area or localised population.

The purpose of this part of the sustainable harvest plan is to demonstrate how the proposed harvest and land management techniques from section 4.2.3 mean that the proposed harvest complies with the legislative requirements and is ecologically sustainable or provides a conservation benefit for the target species.

For example, this section should demonstrate that the proposed harvest and land management will:

- minimise the impact of harvest on surrounding species
- for the harvest of plant parts, maintain the health and survival of plants that the parts will be taken from
- maintain (at a minimum) ecological processes, survival of non-target plants or animals, biodiversity and supporting habitat
- manage disease, pest and weed risks
- minimise soil disturbance and manage erosion and sediment loss risks
- enhance recruitment of seedlings, seed shed or improve the supporting habitat, without compromising the viability of non-target species, ecosystem function or biodiversity of the area
- rehabilitate the area to improve overall ecosystem health and ecological processes to enhance the viability of the target species and vegetation community
- improve the resilience of the site and/or target species.

Supporting information

Where the proposed harvest activity includes a low abundant species and/or disjunct population, a supporting statement should be provided by a qualified authority (e.g. Queensland Herbarium, qualified botanist or scientific expert on the species or vegetation type), establishing that the target population is able to cope with:

- the amount and rates of removal of parts and/or whole plants (i.e. single or continual harvest)
- the harvest technique (i.e. cohort/size class selection, area rotation). and
- the time of harvest.

It is recommended that applications for whole plant harvest be referred to the Queensland Herbarium when the application is for a previously unharvested species or for requests for large quantities. Where any doubt exists as to the advisability of permitting a harvest or granting a licence or to the level of harvest to be permitted, the department will take a precautionary approach, with the integrity of local populations being the foremost consideration.

4.3 Application for licence to harvest plants by salvage only

An application for a protected plant harvesting licence relating to the harvest of whole restricted plants by contingent salvage should provide evidence that the plants will be taken under a lawful clearing activity.

Under the Nature Conservation (Plants) Regulation 2020, contingent salvage can be undertaken by the holder of a protected plant harvesting licence if the land from which the plant is harvested is to be lawfully cleared under the following circumstances:

- a protected plant clearing permit
- in the course of an activity under a mining lease or petroleum lease as relevant under section 57 of the Nature Conservation (Plants) Regulation 2020
- clearing for a government infrastructure project
- clearing for the harvest of a timber plantation, or
- clearing under a development approval under the *Planning Act 2016*.

To provide evidence of the clearing, the applicant must provide the following information:

- for the contingent salvage of restricted plants under a protected plant clearing permit—the details and reference number of the approved permit or permit application
- for the contingent salvage of restricted plants under any other clearing activity—the reference or evidence of the clearing activity.

4.4 Make a determination of the application

The final step of the assessment process is to make the decision to accept or reject the application.

Table 3. Factors to consider when granting a harvesting licence.

Item no.	Item	Requirement	Assessment consideration	Yes/ No
1.	Landholder consent			
	1.1 Landholder consent	Landholder consent received	a) the applicant is the landholder of the land or has the written approval of the landholder where plants are to be taken b) adequate detail has been provided in the completed application form.	
2.	Spatial representation			
	2.1 Location of plants	Spatial location of harvest provided	The applicant has provided a spatial representation of where protected plants are located and proposed to be harvested.	
3.	Identification of plants			
	3.1 Plants to be harvested	Plant species to be harvested have been identified	The applicant has identified species to be harvested (e.g. by a consultant, botanist or local herbarium). Note: In accordance with section 78 of the Nature Conservation (Plants) Regulation 2020, if the application is for the purpose of research, education or conservation, the chief executive may grant a protected plant harvesting licence for an threatened plant or near threatened plant or special least concern plant that has not been adequately identified.	
			The applicant is able to demonstrate that they and/or the person undertaking the harvest can recognise the target species in the field.	
4.	Sustainable harvest plan			
	4.1 Plan	Sustainable harvest plan has been submitted	The applicant has provided a sustainable harvest plan demonstrating that the taking is ecologically sustainable, or provides a conservation benefit to the target species and will not adversely affect the plant's survival in the wild.	
	4.2 Ecology of the target species	Species distribution and abundance have been demonstrated	The applicant has provided information on the following: a) the species distribution and abundance at a state, regional and site level b) the number of plants in the population c) the distribution of the plants and if the distribution is continuous or consists of fragmented populations d) the size of the population at a site scale (i.e. sparse patches/low numbers or densely populated clumps).	
		Reproductive strategies have been identified	The applicant has provided data on the following: a) type—asexual/vegetative regeneration (rhizomes, bulbs, runners etc.) or sexual reproduction b) frequency (e.g. continuous regeneration or annual flowering event) c) seed banking ability—persistence and dispersal potential (i.e. widely or closely to originating plant).	

		Lifecycle data have been provided	The applicant has provided data on the following: a) growth rate (e.g. rapid or slow) b) maturity (e.g. reproductive age within several years or over a decade) c) life expectancy (short/long lived) d) age classes of plants present (e.g. array of classes or single cohort).	
		Habitat requirements are outlined	The applicant has provided the following data: a) substrate and vegetation community preferences—non-specific or limited range b) substrate and vegetation community preferences—non-specific or limited range c) environmental preferences (e.g. hardy and tolerates most conditions, or very sensitive and does not tolerate change) d) symbiotic/parasitic associations.	
		Attributes of the target species have been provided	The application has provided the following data: a) age classes b) size and maturity c) distribution, density and abundance d) size and extent of the population/s e) overall health of individuals and populations.	
4.3 Description of the area to be harvested	Sensitivity or resilience of the site to be harvested has been considered	Has the application considered the following information where appropriate: a) size of the area where the harvest is proposed b) particular landscape features of the proposed harvest site (e.g. depressions, channels, hills, slopes and the steepness of any gradients) c) sensitivity to mechanical damage to site (e.g. bogs and marshes) d) soil characteristics (e.g. sodic, clay, sandy) and risks of erosion or soil loss e) vegetation type/s or community (e.g. grassland, open woodland, vine thicket, tropical rainforest, riparian) f) presence of significant or sensitive habitats in the harvest area g) presence of any significant non-target plant or animal species in the harvest area h) presence of weeds or invasive plants and site sensitivity to weed invasion i) presence of pests or diseases (e.g. <i>Phytophthora cinnamomi</i>) or site sensitivity to pests or diseases j) recent disturbance or stress to site (e.g. drought, fire or flood) k) current and proposed land management and land use practices l) overall health and other general features of the site (e.g. highly disturbed, young regrowth, grazed grassland, improved pasture, remnant vegetation community).		
		Harvest of whole plants	A detailed description of the area to be harvested has been provided, where the activity relates to the harvest of whole	

			plants.	
	4.4 Harvest and land management techniques	Details of how the harvest will be undertaken and how the site will be managed have been provided	The applicant has demonstrated that the proposed harvest and land management techniques are appropriate to the ecology of the target species and characteristics of the proposed harvest site.	
		Harvest management	The applicant has provided information on the proposed harvest techniques and strategies, including: <ul style="list-style-type: none"> a) quantity of whole plants or plant parts to be harvested b) age and size of plants to be harvested (e.g. particular age or size, or the range of ages or sizes) c) where plants will be harvested from (e.g. spread across the harvest site/population extent) d) timing of harvest (e.g. time of year, season, duration of harvest, after reproduction or seed shed, staged over a number of years or locations) e) method of harvest (i.e. how harvest will be done, harvested species accessed and removed from site) (e.g. hand tools, diggers, removal of soil, excavation equipment, cranes, utilisation of existing tracks or creation of new tracks). 	
		Land management	The applicant has provided information on the proposed land management techniques and strategies, including: <ul style="list-style-type: none"> a) fire regime (e.g. the frequency, timing and intensity of controlled burns or exclusion of fire, reduction of hazardous fuel loads) b) tracks for access and removal (e.g. utilisation of existing tracks, establishment of new tracks) c) weed control and weed risk management techniques (e.g. wash down of tyres, removal of existing weeds) d) disease control or risk management techniques (e.g. sterilisation of equipment, checks for signs of disease) e) erosion or sediment control or risk management techniques (e.g. holes filled with soil from the site, soil retained on site, contour banks) f) other land use and management strategies or plans (e.g. changed grazing regime, stocking intensity or introduction or exclusion of stock, site rehabilitation and revegetation). 	
		Harvest and land management of sandalwood	If the harvest activity involves the take of whole sandalwood plants, the applicant has followed the techniques listed in schedule 12 of the Code of practice for native forest timber production on State lands (available through the DAF website) and included this information in the sustainable harvest plan. The appropriate authorities under the <i>Forestry Act 1959</i> should have been obtained DAF, prior to the grant of a protected plant licence	
	4.5 Ecological sustainability of harvest	The applicant has demonstrated ecological sustainability of harvest	Has the application demonstrated the proposed level of harvest complies with the legislative requirements and is ecologically sustainable, or provides a benefit for the conservation of the target species through the following: <ul style="list-style-type: none"> a) minimise the impact of harvest on surrounding species b) for the harvest of plant parts, maintain the health and survival of plants that the parts will be taken from 	

			<p>c) maintain ecological processes, survival of non-target plants, biodiversity and supporting habitat</p> <p>d) manage disease and weed risks</p> <p>e) minimise soil disturbance and manage erosion and sediment loss risks</p> <p>f) enhance recruitment of seedlings, seed shed or improve the supporting habitat (without compromising the viability of non-target species, ecosystem function or biodiversity of the area)</p> <p>g) rehabilitate or manage the harvest area to improve or maintain overall ecosystem health and ecological processes to enhance the viability of the target species and vegetation community</p> <p>h) improve or maintain the resilience of the site and/or target species.</p>	
	4.6 Supporting information	Further information that may be required to support sustainability of harvest	<p>For the harvest of less abundant species and/or disjunct populations, a supporting statement from a qualified authority establishing that the target population is able to cope with the following:</p> <p>a) the amount and rates of removal of parts and/or wholeplants (i.e. single or continual harvest)</p> <p>b) the harvest technique (i.e. cohort/size class selection, area rotation)</p> <p>c) the time of harvest.</p>	
5.	Code of practice			
	5.1 Code	Application complies with code of practice	<p>To the extent relevant, the application complies with the code of practice for the harvest and use of protected plants.</p> <p>If the application relates to the harvest of a plant part from a restricted plant other than an endangered plant, the application should relate to the harvest of quantities greater than the exempt quantities mentioned in section 2.2 of the Code of practice for the take and use of protected plants under an exemption.</p>	

5 Issuing a protected plant growing licence

5.1 Assessment process

5.1.1 Pre-lodgement advice

Before an application is received, Department of Environment and Science (DES) officers can be consulted to discuss the nature of the proposed harvesting activity and whether it is triggered for assessment under the Act.

5.1.2 Application requirements

An application for a protected plant growing licence must include the following information:

- a list of all restricted plants to be harvested (included within the application form)
- a spatial representation of the area where harvest is proposed to be undertaken, identifying correct tenure e.g. private land, crown land
- a sustainable harvest plan describing how the proposed harvest is ecologically sustainable or provides a conservation benefit to the target species
- if the application relates to the harvest of seed or other propagative material from a protected plant that is endangered wildlife, or a protected plant of the family Cycadaceae or Zamiaceae, official qualifications or demonstrated ability to identify the plant must be attached.

An application may also include other documents, including maps, containing information necessary to support the application.

5.1.3 Initial assessment of the application

Incorrect submission of application

In the instance where a protected plant growing licence application is incorrectly submitted to DES for assessment (i.e. a growing licence was not necessary), officers should advise the applicant of the error and keep a record of this correspondence on file for future reference. The applicant will also need to provide DES with a written statement withdrawing the application.

5.1.4 Assessment of proposed harvest

General assessment

In accordance with section 68 of the Nature Conservation (Plants) Regulation 2020, a protected plant growing licence will only be issued in the following circumstances:

- the applicant is the landholder of the land or has the written approval of the landholder where plants are to be taken
- if the licence relates to the taking of whole plants to be used as stock plants - the applicant has the necessary knowledge, facilities and resources to propagate the plants and use the progeny of the plants, and there is a need to:
 - introduce the plant into cultivation for commercial purposes, or
 - replenish or supplement the genetic variation of the plant already in cultivation
- the taking is ecologically sustainable and will not adversely affect the survival in the wild of the target species
- the taking complies with this guideline.

Sustainability assessment

Under section 69 of the Nature Conservation (Plants) Regulation 2020, a protected plant growing licence will only be issued if the harvest of a restricted plant species is ecologically sustainable and will not adversely affect the species' survival in the wild. This means that the harvest provides a conservation benefit for the species to be taken or that the harvest of the species in a particular location is ecologically sustainable. All applications for a protected plant growing licence must include a sustainable harvest plan.

Generally, a more detailed plan should be submitted if the harvest relates to large quantities of whole plants to be used as stock plants and plant parts. For the harvest of a small quantity of whole plants to be used as stock plants or plant parts, the applicant should include all relevant, available information in the sustainable harvest plan however it is accepted that some information suggested for a sustainable harvest plan will not be practical.

5.2 Information to be included in a sustainable harvest plan

In accordance with section 98 of the Nature Conservation (Plants) Regulation 2020, the sustainable harvest plan needs to include sufficient information to enable an assessment officer to make a determination about whether the proposed harvest is ecologically sustainable or provides a conservation benefit to the target species.

To meet the requirements of the legislation, a sustainable harvest plan must demonstrate that:

- the proposed level of harvest:
 - is ecologically sustainable, or
 - provides a benefit for the conservation of the target species.
- the harvest of the target species will not:
 - reduce the ability of an threatened plant population to expand, or
 - affect the ability of a near threatened or special least concern plant population to survive.
- the harvest from a population of a target species must demonstrate that it:
 - does not reduce the capacity of the habitat to support the species

- minimises disruption to the population from which the individuals are taken, and
 - does not threaten the species' viability or genetic integrity, or threaten restricted or localised populations.
- for whole endangered and vulnerable plants only:
 - there is no, or limited commercial, stock available, and
 - the propagation from plant parts is not feasible.

To meet these requirements, the sustainable harvest plan should generally include at a minimum, information about: (a) the ecology and local attributes of the target species; (b) the characteristics of the area to be harvested; (c) how the harvest will be conducted and the harvest area managed; and (d) how the proposed harvest is ecologically sustainable and/or provides a conservation benefit.

5.2.1 Ecology and attributes of the target species

Ecological information about the target species is useful for determining the sensitivity of the species to disturbance. In particular the behavioural and biological characteristics of plant species provide an indication of how well a target species may be able to recover from the harvest regime proposed. Information on key features outlined in Table 4 should be considered for inclusion in the sustainable harvest plan.

Table 4. Species ecology and attribute information required in sustainable harvest plan.

Key feature	Information
Species distribution and abundance	<ul style="list-style-type: none"> ● state, regional and site level ● number of populations ● distribution—contiguous or fragmented populations.
Reproductive strategies	<ul style="list-style-type: none"> ● type—asexual/vegetative regeneration (rhizomes, bulbs, runners etc.) or sexual reproduction ● frequency (i.e. continuous regeneration or annual flowering event) ● seed banking ability—persistence and dispersal potential (i.e. widely or closely to originating plant) ● reproductive and germination requirements or triggers (e.g. fire inundation, extended dry period, or disturbance).
Lifecycle	<ul style="list-style-type: none"> ● growth rates—rapid or slow ● maturity (e.g. reproductive age within several years or over a decade) ● life expectancy (i.e. short/long lived) ● annual or perennial species ● seasonal or climatic dependencies (e.g. periodic inundation).
Habitat requirements	<ul style="list-style-type: none"> ● substrate and vegetation community preferences—non-specific or limited range ● environmental preferences (e.g. hardy and tolerates most conditions, or very sensitive and does not tolerate change, or has particular preferences or requirements such as well drained soils, seasonally wet areas, hill tops or drainage lines etc.) ● symbiotic/parasitic associations.
Attributes of the target species	<ul style="list-style-type: none"> ● age classes (e.g. array of classes or single cohort) ● size and maturity ● distribution, density and abundance ● size and extent of the population/s.

5.2.2 Description of the area to be harvested

Information about the proposed harvest area may be used to evaluate the general ecological health of the proposed harvest area and how it will respond to harvest and disturbance. A description of the area to be harvested should be provided in a sustainable harvest plan to give the best indication of how a site will respond to a harvest activity—for example, the site (including habitat) resilience, or if the site is susceptible to damage and potential degradation over time. Generally, a more detailed description should be provided for the harvest of whole plants. The description of the area to be harvested may include the following information.

- size of the area where harvest is proposed
- particular landscape features of the proposed harvest site (e.g. depressions, channels, hillside, hilltops, slopes and any gradients)
- presence of bogs, marshes or wet areas (seasonal or permanent) that may support or provide habitat for the target species or increase the potential for the site to be easily damaged mechanically
- soil characteristics (e.g. sodic, clay, sandy) and risks of erosion or sediment loss
- vegetation type/s or community (e.g. grassland, open woodland, vine thicket, tropical rainforest, riparian)
- any significant or sensitive habitats
- any significant or sensitive non-target plant or animal species, including those that may be placed at risk by the proposed harvest
- presence of weeds or invasive plants or attributes that may make the site prone to weed invasion
- presence of pests or diseases (e.g. *Phytophthora cinnamomi*) or attributes that may make the site susceptible to pests or diseases
- any recent disturbance or stresses (e.g. drought, fire or flood)
- current and intended land management and land use practices (e.g. grazing, regular burns or recreational activities)
- overall health and other general features of the site (e.g. highly disturbed, young regrowth, grazed grassland, improved pasture, mature vegetation or remnant vegetation community).

5.2.3 Harvest and land management techniques

Details about how the proposed harvest will be undertaken and how the proposed harvest site will be managed are key components of the sustainable harvest plan. They will be used to help demonstrate how the proposed harvest will be undertaken to address the particular traits of the harvest site and target species to ensure that the proposed harvest is ecologically sustainable. The proposed harvest and land management techniques should address and be appropriate to the ecology of the target species and characteristics of the proposed harvest site using the information outlined in sections 5.2.1 and 5.2.2. Information on the following should, at a minimum, be included in the sustainable harvest plan:

Harvest management

Proposed harvest techniques and strategies, including:

- quantity of whole plants or plant parts to be harvested
- age and size of plants to be harvested (e.g. particular age or size, or the range of ages or sizes)
- where plants will be harvested from (e.g. spread across the harvest site/population extent)
- timing of harvest (e.g. particular time of year, season, duration of harvest, after reproduction or seed shed, rotations or staged over a number of years or locations)
- method of harvest (i.e. how harvest will be done, harvested species accessed and removed from site) (e.g. hand tools, removal of soil, diggers or excavation equipment, cranes, existing or new).

Land management

Proposed land management techniques and strategies (where relevant to the target species and site), including:

- fire regime (e.g. the frequency, timing and intensity of controlled burns or exclusion of fire, reduction of hazardous fuel loads)
- tracks for access and removal (e.g. utilisation of existing tracks, establishment of new tracks)
- weed control and weed risk management techniques (e.g. wash down of tyres, removal of existing weeds)
- disease control or risk management techniques (e.g. sterilisation of equipment, checks for signs of disease)
- erosion or sediment control or risk management techniques (e.g. holes filled with soil from the site, soil retained on site, contour banks)
- other land use and management strategies or plans (e.g. changed grazing regime, stocking intensity or introduction or exclusion of stock, site rehabilitation and revegetation).

Harvest and land management of sandalwood

Where the harvest activity involves the take of whole sandalwood plants to be used as stock plants, the applicant should follow the techniques listed in schedule 12 of the Code of practice for native forest timber production on State lands, available through the DAF website.

The harvest of a sandalwood plant may also require an authority from DAF, under the *Forestry Act 1959*. An approval under the *Forestry Act 1959* is required prior to the approval of a protected plant growing licence.

5.2.4 Ecological sustainability of harvest

The harvest regime should be designed to minimise the impact on a target species population, particularly avoiding potential population declines at the site and regional levels. As a general principle, sustainable harvest of a plant does not involve the substantial take of whole or parts of restricted plant species from a particular area or localised population.

The purpose of this part of the sustainable harvest plan is to demonstrate how the proposed harvest and land management techniques from section 5.2.3 mean that the proposed harvest complies with the legislative requirements and is ecologically sustainable or provides a conservation benefit for the target species.

For example, this section should demonstrate that the proposed harvest and land management will:

- minimise the impact of harvest on surroundingspecies
- for the harvest of plant parts, maintain the health and survival of plants that the parts will be taken from
- maintain (at a minimum) ecological processes, survival of non-target plants or animals, biodiversity and supporting habitat
- manage disease, pest and weed risks
- minimise soil disturbance and manage erosion and sediment loss risks
- enhance recruitment of seedlings, seed shed or improve the supporting habitat, without compromising the viability of non-target species, ecosystem function or biodiversity of the area
- rehabilitate the harvest area to improve overall ecosystem health and ecological processes to enhance the viability of the target species and vegetation community
- improve the resilience of the site and/or target species.

Supporting information

Where the proposed harvest activity includes a less abundant species and/or disjunct population, a supporting statement should be provided by a qualified authority (e.g. Queensland Herbarium, qualified botanist of scientific expert on the species or vegetation type), establishing that the target population is able to cope with:

- the amount and rates of removal of parts and/or whole plants (i.e. single or continual harvest)
- the harvest technique (i.e. cohort/size class selection, area rotation), and
- the time of harvest.

It is recommended that applications for whole plant harvest be referred to the Queensland Herbarium when the application is for a previously unharvested species, or for requests for large quantities. Where any doubt exists as to the advisability of permitting a harvest or granting a licence or to the level of harvest to be permitted, the department will take a precautionary approach, with the integrity of local populations being the foremost consideration.

5.3 Make a determination of the application

The final step of the assessment process is to make the decision to accept or reject the application.

Table 5. Factors to consider when assessing an application for a protected plant growing licence.

Item no.	Item	Requirement	Assessment consideration	Yes/ No
1.	Landholder consent			
	1.1 Landholder consent	Landholder consent received	a) the applicant is the landholder of the land or has the written approval of the landholder where plants are to be taken b) adequate detail has been provided in the completed application form.	
2.	Spatial representation			
	2.1 Location of plants	Spatial location of harvest provided	The applicant has provided a spatial representation of where protected plants are located and proposed to be harvested.	
3.	Identification of plants			
	3.1 Plants to be harvested	Plant species to be harvested have been identified	The applicant has identified the species to be harvested (e.g. by a consultant, botanist or local herbarium). Note: In accordance with section 78 of the Nature Conservation (Plants) Regulation 2020, if the application is for the purpose of research, education or conservation, the chief executive may grant a protected plant harvesting licence for an threatened plant or near threatened plant or special least concern plant that has not been adequately identified.	
			The applicant is able to demonstrate that they and/or the person undertaking the harvest can recognise the target species in the field.	
		Identification of endangered plants, and a plant of the family Cycadaceae or Zamiaceae	In accordance with section 70 of the Nature Conservation (Plants) Regulation 2020, if the application relates to the harvest of seed or other propagative material from a protected plant that is endangered wildlife, or a protected plant of the family Cycadaceae or Zamiaceae, official qualifications or demonstrated ability to identify the plant must be attached. To provide evidence of official plant identification qualifications, official certification from an education facility should be included. To provide evidence of demonstrated ability, a curriculum vitae outlining demonstrated practical experience in plant identification should be included.	
4.	Sustainable harvest plan			
	4.1 Plan	Sustainable harvest plan has been submitted	The applicant has provided a sustainable harvest plan demonstrating that the taking is ecologically sustainable and will not adversely affect the plant's survival in the wild.	
	4.2 Ecology of the target species	Species distribution and abundance has been demonstrated	The applicant has provided information on the following: a) the species distribution and abundance at a state, regional and site level b) the number of plants in the population c) the distribution of the plants and if the distribution is continuous or consists of fragmented populations d) the size of the population at a site scale (i.e. sparse	

			patches/low numbers or densely populated clumps).	
		Reproductive strategies have been identified	The applicant has provided data on the following: a) type—asexual/vegetative regeneration (rhizomes, bulbs, runners etc.) or sexual reproduction b) frequency (e.g. continuous regeneration or annual flowering event) c) seed banking ability—persistence and dispersal potential (i.e. widely or closely to parent).	
		Lifecycle data have been provided	The applicant has provided data on the following: a) growth rate (e.g. rapid or slow) b) maturity (e.g. reproductive age within several years or over a decade) c) life expectancy (short/long lived) d) age classes of plants present (e.g. array of classes or single cohort).	
		Habitat requirements are outlined	The applicant has provided the following data: a) substrate and vegetation community preferences—non-specific or limited range b) environmental preferences (e.g. hardy and tolerates most conditions, or very sensitive and does not tolerate change) c) symbiotic/parasitic associations.	
		Attributes of the target species have been provided	The application has provided the following data: a) age classes b) size and maturity c) distribution, density and abundance d) size and extent of the population/s e) overall health of individuals and populations.	
	4.3 Description of the area to be harvested	Sensitivity or resilience of the site to be harvested has been considered	Has the application considered the following information where appropriate: a) size of the area where the harvest is proposed b) particular landscape features of the proposed harvest site (e.g. depressions, channels, hills, slopes and the steepness of any gradients) c) sensitivity to mechanical damage to site (e.g. bogs and marshes) d) soil characteristics (e.g. sodic, clay, sandy) and risks of erosion or soil loss e) vegetation type/s or community (e.g. grassland, open woodland, vine thicket, tropical rainforest, riparian) f) presence of significant or sensitive habitats in the harvest area g) presence of any significant non-target plant or animal species in the harvest area h) presence of weeds or invasive plants and site sensitivity to weed invasion i) presence of pests or diseases (e.g. Phytophthora cinnamomi) or site sensitivity to pests or diseases j) recent disturbance or stress to site (e.g. drought, fire or flood)	

			<p>k) current and proposed land management and land use practices</p> <p>l) overall health and other general features of the site (e.g. highly disturbed, young regrowth, grazed grassland, improved pasture, remnant vegetation community).</p>	
	4.4 Harvest and land management techniques	Details of how the harvest will be undertaken and how the site will be managed have been provided	The applicant has demonstrated that the proposed harvest and land management techniques are appropriate to the ecology of the target species and characteristics of the proposed harvest site.	
		Harvest management	<p>The applicant has provided information on the proposed harvest techniques and strategies, including:</p> <p>a) quantity of whole plants or plant parts to be harvested</p> <p>b) age and size of plants to be harvested (e.g. particular age or size, or the range of ages or sizes)</p> <p>c) where plants will be harvested from (e.g. spread across the harvest site/population extent)</p> <p>d) timing of harvest (e.g. time of year, season, duration of harvest, after reproduction or seed shed, staged over a number of years or locations)</p> <p>e) method of harvest (i.e. how harvest will be done, harvested species accessed and removed from site) (e.g. hand tools, diggers, removal of soil, excavation equipment, cranes, utilisation of existing tracks or creation of new tracks).</p>	
		Land management	<p>The applicant has provided information on the proposed land management techniques and strategies, including:</p> <p>a) fire regime (e.g. the frequency, timing and intensity of controlled burns or exclusion of fire, reduction of hazardous fuel loads)</p> <p>b) tracks for access and removal (e.g. utilisation of existing tracks, establishment of new tracks)</p> <p>c) weed control and weed risk management techniques (e.g. wash down of tyres, removal of existing weeds)</p> <p>d) disease control or risk management techniques (e.g. sterilisation of equipment, checks for signs of disease)</p> <p>e) erosion or sediment control or risk management techniques (e.g. holes filled with soil from the site, soil retained on site, contour banks)</p> <p>f) other land use and management strategies or plans (e.g. changed grazing regime, stocking intensity or introduction or exclusion of stock, site rehabilitation and revegetation).</p>	
		Harvest and land management of sandalwood	<p>If the harvest activity involves the take of whole sandalwood plants to be used as stock plants, the applicant has followed the techniques listed in schedule 12 of the Code of practice for native forest timber production on State lands, (available through the DAF website) and included this information in the sustainable harvest plan.</p> <p>The appropriate authorities under the <i>Forestry Act 1959</i> should have been obtained from DAF, prior to the grant of a protected plant licence</p>	

	4.5 Ecological sustainability of harvest	The applicant has demonstrated ecological sustainability of harvest	<p>Has the application demonstrated the proposed level of harvest complies with the legislative requirements and is ecologically sustainable, or provides a benefit for the conservation of the target species through the following:</p> <ul style="list-style-type: none"> a) minimise the impact of harvest on surrounding species b) for the harvest of plant parts, maintain the health and survival of plants that the parts will be taken from c) maintain ecological processes, survival of non-target plants, biodiversity and supporting habitat d) manage disease and weed risks e) minimise soil disturbance and manage erosion and sediment loss risks f) enhance recruitment of seedlings, seed shed or improve the supporting habitat (without compromising the viability of non-target species, ecosystem function or biodiversity of the area) g) rehabilitate or manage the harvest area to improve or maintain overall ecosystem health and ecological processes to enhance the viability of the target species and vegetation community h) improve or maintain the resilience of the site and/or target species. 	
	4.6 Supporting information	Further information that may be required to support sustainability of harvest	<p>For the harvest of less abundant species and/or disjunct populations, a supporting statement from a qualified authority establishing that the target population is able to cope with the following:</p> <ul style="list-style-type: none"> a) the amount and rates of removal of parts and/or whole plants (i.e. single or continual harvest) b) the harvest technique (i.e. cohort/size class selection, area rotation) c) the time of harvest. 	
5.	Codes of practice			
	5.1 Code	Application complies with codes of practice	To the extent relevant, the application complies with the Code of practice for the take and use of protected plants under an exemption and the Code of practice for the harvest and use of protected plants under an authority.	

6. Key definitions

"**codes of practice**" are the **Code of practice for the take and use of protected plants under an exemption** (the Plant exemptions code) and the **Code of practice for the harvest and use of protected plants under an authority** (the Plants authority code), made by the chief executive under section 174A of the *Nature Conservation Act 1992*.

"**clearing impact area**" is defined as the area to be cleared (development footprint), including an additional area 100m in width around the development footprint.

"**contingent salvage**" see the Plants Regulation schedule 5 (Dictionary).

"**flora survey guidelines**" means the Flora Survey Guidelines—Protected Plants, made by the chief executive under section 142 of the Nature Conservation (Plants) Regulation 2020.

"**near threatened plant**" is a protected plant that is listed as near threatened wildlife, under the Nature Conservation (Plants) Regulation 2020.

"**supporting habitat**" is defined as the components, including other plants, of the habitat necessary for the survival of a threatened plant or near threatened plant; this includes all least concern plants within 100m of the threatened plant or near threatened plant or population.

"**plant part**" for a protected plant, includes a stem, phyllode, foliage, bud, flower, spore, seed, fruit, bark, oil, root, rhizome, resin, gum, exudate, gall, genetic material, chemical and any other structural component or constituent, of the plant.

"**preferred habitat**" is defined as an area containing the prevailing ecological conditions critical to the survival of an threatened plant or near threatened plant species.

"**protected plants assessment guidelines**" means this guideline for considering applications for wildlife authorities for protected plants, made by the chief executive under section 174B of the *Nature Conservation Act 1992*.

"**protected plant licence**" means a protected plant harvesting licence or a protected plant growing licence.

"**restricted plant**" means a protected plant that is listed as endangered, vulnerable, near threatened wildlife or a special least concern plant, under the Nature Conservation (Plants) Regulation 2020.

"**sandalwood**" means a plant of the species *Santalum lanceolatum*.

"**threatened plant**" means a protected plant that is listed as extinct, extinct in the wild, critically endangered, endangered or vulnerable wildlife under the Nature Conservation (Plants) Regulation 2020.

"**whole plant**" means for a protected plant other than sandalwood - no part of the plant that may naturally and readily regrow is left behind. For sandalwood, whole plant means the trunk or main stem of the plant is taken even if a part of the plant that may naturally or readily regrow is left behind.