Approved Amended Area Management Plan

Title	Area Management Plan to control Weed of National Significance (WoNS) weed species in Western Queensland (version 2)
Reference no:	2013/005199
Entity/ies	Desert Channels Queensland 92 Galah Street Longreach QLD 4730
Area	The AMP applies to the following areas: • Mt Isa City, Richmond Shire, Cloncurry Shire, McKinlay Shire, Flinders Shire, Barcaldine Regional, Winton Shire, Boulia Shire, Longreach Regional, Quilpie Shire, Diamantina Shire, Barcoo Shire, Bulloo Shire and Paroo Shire local government areas; and • the parts of Murweh Shire, Blackall Tambo Regional and Barcaldine Regional local government areas that are not within the Brigalow Belt Bioregion.
Relevant purpose	☒ Controlling non-native plants or declared pests ☐ Ensuring public safety ☐ Relevant infrastructure ☐ Clearing of encroachment ☐ Thinning ☐ For fodder harvesting, other than on restricted (fodder harvesting) land ☐ Necessary environmental clearing
Plan period	20 September 2013 to 20 September 2023
Mandatory condition(s)	Not applicable
Additional condition(s)	Not applicable

Signature Date

Lana Bartholomew
A/Executive Director, Operations Support
Department of Natural Resources and Mines

Note: Other legislation may regulate clearing activities including the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* and the Queensland Government's *Water Act 2000, Aboriginal Cultural Heritage Act 2003*, *Nature Conservation Act 1992, Environmental Protection Act 1994, Coastal Protection and Management Act 1995, Queensland Heritage Act 1992, Fisheries Act 1994, Local Government Act 1993,* and *Sustainable Planning Act 2009*. You should determine if your clearing activity will be affected before clearing any vegetation.

Area Management Plan to control Weed of National Significance (WoNS) weed species in Western Queensland (version 2)

Desert Channels Queensland (November 2015)

Area Management Plan Purpose

- To control non-native plants or declared pests plants

Management Intent:

1. To carry out control of weed species within the western areas of Queensland which are in high densities;
2. Provide conditions that will allow the native vegetation to be maintained or restored to a functional regional ecosystem over time; and
3. Undertake these activities only on properties with an approved current Desert Channels Queensland (DCQ) 5 Year Weed Plan with control areas, methodologies, monitoring and reporting identified.

The weed species targeted are:

- prickly acacia (*Acacia nilotica)*;
- mesquite (*Prosopis spp.);*
- parkinsonia (*Parkinsonia aculeata*); and
- rubber vine (*Cryptostegia grandiflora).*

Management Outcome:

1. Reduction in high density weed infestations in Western Queensland;
2. Improvement in the biodiversity of regional ecosystems; and
3. Improvement in the water quality and habitat of waterways and wetlands.

It is expected that 250 000 hectares per year will have reduced impacts from weed species by work carried out by DCQ through this AMP. Of this area, only 2 000 hectares per year is expected to be within the sensitive riverine communities. Work will only be undertaken where an approved current DCQ 5 Year weed Plan is in existence and DCQ can provide on-ground monitoring while chemicals are being applied.

Area the AMP will cover:

The AMP will cover the following shires: Mt Isa, Richmond, Cloncurry, McKinlay, Flinders, Barcaldine, Winton, Boulia, Longreach, Blackall Tambo, Murweh, Quilpie, Diamantina, Barcoo, Bulloo and Paroo. It will only cover these shires where they apply to the Regional Vegetation Management Code for the Western Bioregions code area as shown on the map "Areas subject to the DCQ weed area management plan".

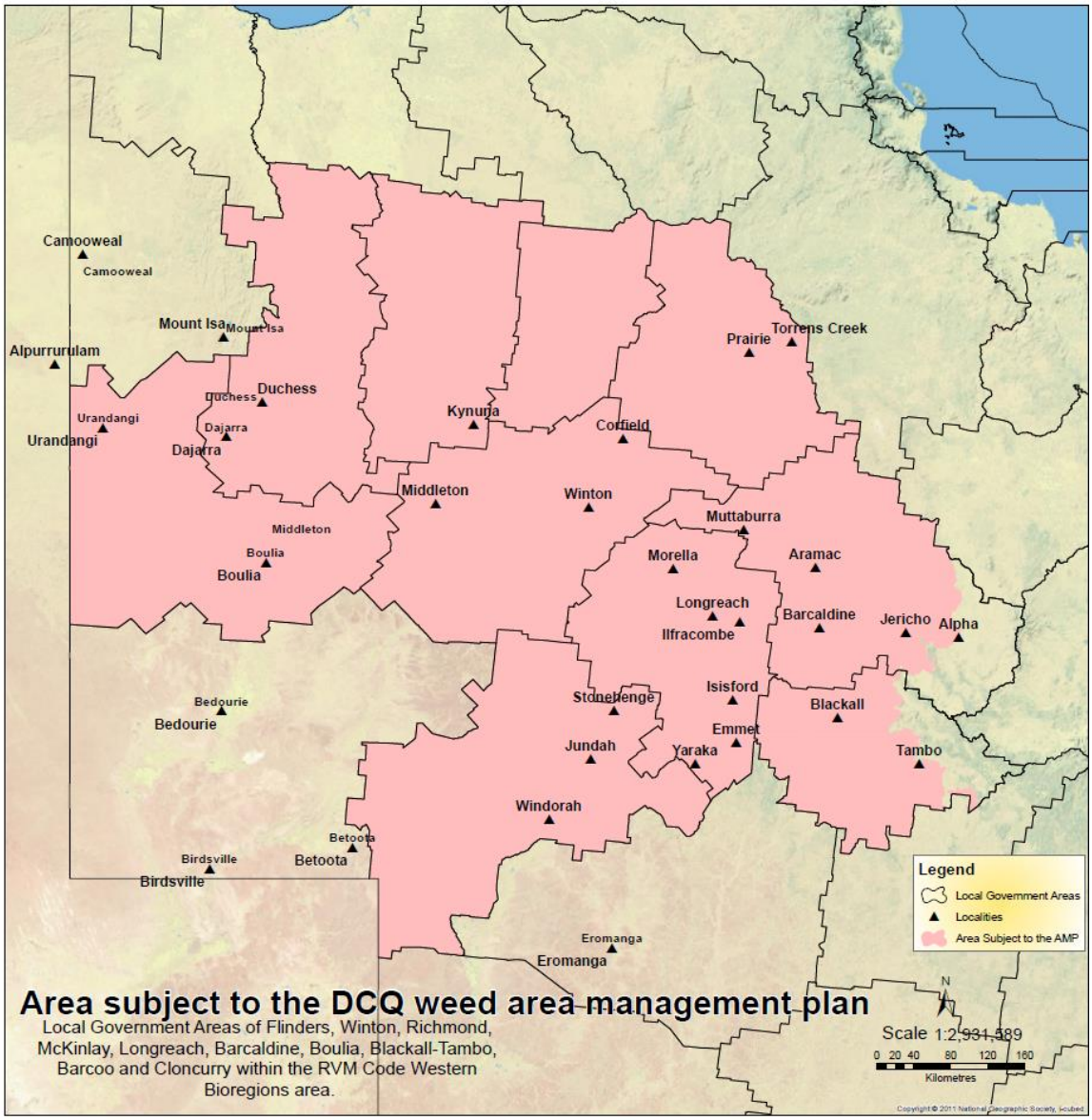
Giving Notice

Either the landholder or Desert Channels Queensland must give notice to the Department of Natural Resources and Mines before commencing native vegetation clearing under this area management plan. A notification form can be downloaded at www.dnrm.qld.gov.au/__data/assets/pdf_file/0016/139111/vege-management-notification-form-for-amp.pdf. The form must be lodged at a DNRM business centre.

Application of the AMP

Application of this AMP will apply in stages.

Stage 1 will include the shires of Flinders, Winton, Richmond, McKinlay, Longreach, Barcaldine, Boulia, Blackall-Tambo, Barcoo and Cloncurry. This stage will be in effect from the date of approval ending on 30 June 2017. See below for a map of the area.



Stage 2 will include the shires of Mt Isa, Diamantina, Murweh, Quilpie, Paroo and Bulloo. This stage will incorporate lessons learnt in stage 1 to address any weed issues surrounding the highly significant wetlands with the shires of this stage. This stage will approximately occur from mid 2017 until mid 2022.

Reporting

DCQ will be required to demonstrate the effectiveness of control operations against the management outcomes following each stage (both stage 1 and stage 2), with reporting to the Chief Executive administering the VMA. Such reporting will require:

- to be completed within 30 Business Days from the end of the stage;
- Area of land treated that has been targeted in the stage under the AMP, measured in non-riparian, riparian and riverine.
- provide details on 10 representative sites subject to the control providing details on the impacts on:

- weed species using the Bio-condition methodology
- native vegetation species using the Bio-condition methodology

Application of latter stages
Application of latter stages will occur following review of the reports and where approved by the Chief Executive administering the VMA.

Amendment of the AMP
Any requests to amend the AMP follows section 20ZC of the VMA (Amendment application for particular plans).

Rationale of the AMP
This AMP has been designed to control high density weed infestations that are complicated to control using conventional weed control techniques such as basal barking or single machinery. These sites are often complicated because of varying topography combined with the presence of native species. These factors significantly constrain physically accessing the sites and implementing efficient control programs. Often these high density weed infestations are in wetter parts of the landscape such as riparian areas or wetlands.

Due to the complicated nature of these weed infestations there is an acknowledgement that native species will be affected through certain control programs targeting these infestations, such as the use of certain herbicides. Although there is expected to be damage to the native species, through the clearing of the weed infestations there will be a subsequent promotion of suitable conditions for recruitment of native species. This will allow for a longer term improvement of the regional ecosystem and its biodiversity values. In addition, it will ensure not only the promotion of the condition of the regional ecosystem subject to the weed control, but also other ecosystems that may be prone to weed infestation from that subject site (for example downstream ecosystems at risk of weed infestation).

As a result of the damage predicted to the native species, a risk management process has been conducted to assist with balancing the risk to the native species vulnerable to the weed control program, and the risk to the native species through the lack of control of weed species. This risk management process has assisted in the development in the AMP.

Weed control technique:
Weeds will be controlled using proven techniques designed for complicated sites in Western Queensland, such as the unmanned aerial vehicle (UAV). Control will be limited in high density sites, which are often in areas with greater water supply, such as riparian areas.

The mapping of weed density will be carried out using satellite imagery techniques developed by the Department of Science, Information Technology, Innovation and the Arts (DSITIA) and will indicate areas where the weeds will be targeted. This will be decided based on the strategic nature of the infestation, such as in the head waters of catchments, or that pose risks to high valued assets such as town water supplies and National Parks. This mapping will be qualified for presence of the weed species through either higher resolution imagery (such as SPOT imagery), or through on-ground verification.

Once the sites have been determined for control, a property based weed plan will be developed by DCQ and the owner to ensure long term control for the target weed species. This weed plan will be in place prior to work being conducted under this AMP and will exist for a five year period. These weed plans will be developed individually for properties and include as a minimum:

- spatial areas of weeds subject to control works;
- control techniques to be implemented (UAV or other techniques);
- chemical and associated rate;
- monitoring requirement; and
- requirement for ongoing control.

Summary of proposed conditions to be followed for the AMP

- **Clearing only occurs in areas identified through a current approved Desert Channels Queensland five year weed plan.**
- **Clearing only occurs for the following non-native plant species:**
    - **a) prickly acacia (*Acacia nilotica)*;**
    - **b) mesquite (*Prosopis spp.);***
    - **c) parkinsonia (*Parkinsonia aculeata*); and**
    - **d) rubber vine (*Cryptostegia grandiflora).***
- **Application of root absorbed herbicides is only to be applied outside 30 metres from the drip line of mature trees and is not to be applied on slopes greater than 5% or actively eroding sites. Applying root absorbed herbicides on low slopes allows any herbicide to disintegrate into the soil profile and be taken up by the target weed species following rainfall.**
- **Aerial application of foliar applied herbicides is only permitted where it is registered for aerial application under a minor use permit, an emergency use permit or on the product label, and its application occurs strictly in accord with the permit or label conditions.**
- **No mature trees are to be directly applied with foliar or basal barking herbicide.**
- **Any vegetation debris from the control operations is to be left where it lays, unless it is required to be pushed to allow for access.**
- **In Table 9 Regional ecosystems, any canopy vegetation will not be cleared.**
- **Access tracks are limited to 4 metres wide and must avoid causing accelerated soil erosion. Any access tracks that cross a stream protection area must be designed to cross perpendicular to the stream.**
- **No soil disturbance is to occur in wetland areas or stream protection areas unless as a result of clearing for an access track.**
- **No exotic species such as non-native pasture species are to be intentionally introduced by humans as a consequence of control operations.**
- **Either the landholder or Desert Channels Queensland must give notice to the Department of Natural Resources and Mines before commencing native vegetation clearing under this area management plan. A notification form can be downloaded at www.dnrm.qld.gov.au/__data/assets/pdf_file/0016/139111/vege-management-notification-form-for-amp.pdf. The form must be lodged at a DNRM business centre.**

Explanation of how the clearing proposal is not inconsistent with the Regional Vegetation Management code for Western Bioregions		
Performance Requirement	Code Acceptable Solution	AMP solution and proposed conditions
PR W.1 Limits to clearing for weed or pest management To regulate the clearing of vegetation in a way that conserves remnant vegetation that are regional ecosystems, does not cause land degradation, prevents the loss of biodiversity and maintains ecological processes—subject to the limitations required to meet PR W.2 to PR W.7—clearing is limited to the extent necessary to— a) control non-native plants or declared pests; or b) provide access for control of non-native plants or declared pests if no alternative route exists	Nil	Any proposed control areas will only occur in areas mapped out through DSITIA methodology and that are planned for in the DCQ weed plan. These areas will be shown spatially within the DCQ weed plan. Clearing under this AMP will only be limited to those areas where there is a dense infestation of the prescribed weed species and that is mapped through a developed DCQ weed plan. Such an approach will ensure that clearing under this AMP is limited to the extent necessary, using both the best available information and that it is identified subsequently through best practice weed plans. Such an approach will ensure that areas without weed infestations are not cleared under this AMP. <u>Proposed AMP condition</u> • **Clearing only occurs in areas identified through a current approved Desert Channels Queensland five year weed plan.** • **Clearing only occurs for the following non-native plant species:** **a) prickly acacia (*Acacia nilotica)*;** **b) mesquite (*Prosopis spp.);*** **c) parkinsonia (*Parkinsonia aculeata*); and** **d) rubber vine (*Cryptostegia grandiflora).***
PR W.2: Wetlands To regulate the clearing of vegetation in	AS W.2 W.2.1	Clearing will occur in a very targeted fashion using an unmanned aerial vehicle or other proven technique, ensuring

a way that prevents the loss of biodiversity and maintains ecological processes—assessable vegetation associated with any natural significant wetland and/or natural wetland is protected to maintain— a) water quality by filtering sediments, nutrients and other pollutants; and b) aquatic habitat; and c) terrestrial habitat.	Clearing and associated soil disturbance within— a) any natural wetland; and b) 100 metres from any natural wetland; and c) any natural significant wetland; and d) 200 metres from any natural significant wetland occurs only— i) within a 1.5 metre radius from the base of the stem of individual non-native or declared plants, or within a 3 metre radius around each hole of a rabbit warren; and ii) to the extent necessary to provide access for the control of the non-native or declared plant or to the rabbit warren if no alternative route exists, unless the clearing is to control or provide access to an animal or plant declared as a class 1 or 2 pest under the Land Protection (Pest and Stock Route Management) Act 2002 for which there is a pest eradication plan in place and is carried out in accordance with that plan.	precision when applying the chemical application. However during the application, there is likely to be non canopy species within the targeted areas affected by the control. This will be as a result of lack of seeing them because of the density of the weed species, but also to allow for operational efficiencies in treating the areas in a comprehensive way. However, mature species present during the control, will be avoided by not applying any control method within 30m of the drip line of the mature trees. In addition any soil applied herbicide will only be applied on low slopes (less than 5%), ensuring that any granular herbicide will disintegrate into the soil profile and be taken up by the prickly acacia, rather than moving downstream affecting non-target species. Such a control technique will ensure that the PR is met, because ● mature vegetation will be retained, ensuring their ongoing role in water quality, aquatic habitat and terrestrial habitat maintenance. ● Weed species will be left where they are controlled, ensuring that they play a role in maintaining the bank structure of the wetland, maintaining water quality features. In addition, leaving dead stags will provide certain value as aquatic and terrestrial habitat. ● No soil disturbance will occur from the clearing event, ensuring maintenance of water quality in the wetland buffer areas as prescribed by the code. ● The clearing of the weed species will allow for natural recruitment of native species in the area, re-establishing the regional ecosystems characteristics, thereby promoting the aquatic and terrestrial habitat of the natural community. In addition re-establishing the natural diversity of the area with a greater species life form such

		as shrubs and grasses will also lead to a greater level of water quality improvement. • No clearing will be required through wetland areas for an access track ensuring no soil disturbance to wetland area. <u>Proposed AMP condition</u> • **Application of root absorbed herbicides is only to be applied outside 30 metres from the drip line of <u>mature trees</u> and is not to be applied on slopes greater than 5% or actively eroding sites. Applying root absorbed herbicides on low slopes allows any herbicide to disintegrate into the soil profile and be taken up by the target weed species following rainfall.** • **No <u>mature trees</u> are to be directly applied with foliar or basal barking herbicide.** • **Aerial application of foliar applied herbicides is only permitted where it is registered for aerial application under a minor use permit, an emergency use permit or on the product label, and its application occurs strictly in accord with the permit or label conditions.** • **Access tracks are limited to 4 metres wide and must avoid causing accelerated soil erosion. Any access tracks that cross a <u>stream protection area</u> must be designed to cross perpendicular to the stream.** • **No soil disturbance is to occur in <u>wetland areas</u> or <u>stream protection areas</u> unless as a result of clearing for an access track.**
PR W.3: Watercourses To regulate the clearing of vegetation in a way that does not cause land	AS W.3 W.3.1 Clearing and associated soil disturbance within— a) any watercourse; and	Similar to the wetland PR - clearing will occur in a very targeted fashion using an unmanned aerial vehicle or other proven technique, ensuring precision when applying the chemical application. However during the application, there is

degradation, prevents the loss of biodiversity and maintains ecological processes— assessable vegetation associated with any watercourse is protected to maintain— a) bank stability by protecting against bank erosion; and b) water quality by filtering sediments, nutrients and other pollutants; and c) aquatic habitat; and d) terrestrial habitat.	b) 200 metres from each high bank of each watercourse with a stream order 5 or greater; and c) 100 metres from each high bank of each watercourse with a stream order 3 or 4; and d) 50 metres from each high bank of each watercourse with a stream order 1 or 2, occurs only— i) within a 1.5 metre radius from the base of the stem of individual non-native or declared plants or within a 3 metre radius around each hole of a rabbit warren; and ii) to the extent necessary to provide access for the control of the non-native or declared plant or to the rabbit warren if no alternative route exists, unless the clearing is to control or provide access to an animal or plant declared as a class 1 or 2 pest under the Land Protection (Pest and Stock Route Management) Act 2002 for which there is a pest eradication plan in place and is carried out in accordance with that plan	likely to be non canopy species within the areas that will be affected by the control. This will be as a result of lack of seeing them because of the density of the weed species, but also to allow for operational efficiencies in treating the areas. However, mature species present during the control, will be avoided by not applying any control method within 30 metres of the drip line of the mature trees and only applying granular herbicide on low slopes. Such a control technique will ensure that PR is met, because • mature vegetation will be retained, ensuring their ongoing role in water quality, aquatic habitat and terrestrial habitat maintenance as well as supporting bank stability. • Weed species controlled will be left where they are controlled, ensuring that they play a role in maintaining the bank structure of the riparian area, maintaining water quality features, as well as providing certain features from stags in the provision of aquatic and terrestrial habitat. • No soil disturbance will occur from the clearing event, allowing for maintenance of water quality. • The clearing of the weed species will allow for natural recruitment of native species in the area, re-establishing the regional ecosystems characteristics, thereby promoting the aquatic and terrestrial habitat of the nature community. In addition, re-establishing the natural diversity of the area with a greater species form (grass, shrubs, saplings etc.) present in the area will lead to a greater level of water quality improvement. • No clearing for an access track will be required in riparian areas <u>Proposed AMP condition</u> • **Application of root absorbed herbicides is only to be**

		applied outside 30 metres from the drip line of mature trees and is not to be applied on slopes greater than 5% or actively eroding sites. Applying root absorbed herbicides on low slopes allows any herbicide to disintegrate into the soil profile and be taken up by the target weed species following rainfall. • **No mature trees are to be directly applied with foliar or basal barking herbicide.** • **Aerial application of foliar applied herbicides is only permitted where it is registered for aerial application under a minor use permit, an emergency use permit or on the product label, and its application occurs strictly in accord with the permit or label conditions** • **Access tracks are limited to 4 metres wide and must avoid causing accelerated soil erosion. Any access tracks that cross a stream protection area must be designed to cross perpendicular to the stream.** • **No soil disturbance is to occur in wetland areas or stream protection areas unless as a result of clearing for an access track.**
PR W.4: Soil erosion To regulate the clearing of vegetation in a way that does not cause land degradation and maintains ecological processes—the effect of clearing does not result in— a) mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank	AS W.4 W.4.1 Clearing and associated soil disturbance on— a) stable soils on a slope greater than 10%; and b) unstable soils on a slope greater than 3%; and c) very unstable soils on a slope greater than 1%, occurs only— i) within a 1.5 metre radius from the base of the stem of individual non-native or declared plants or within a 3 metre radius around each hole of a rabbit warren; and ii) to the extent necessary to provide access for	Clearing will be in a very targeted fashion and all vegetation cleared will be left where it lay. There will be no soil disturbance as a result of this clearing technique. As all the vegetation will be left where it remains following death, it will naturally decompose maintaining for as long as possible the root structure in the soil. Such a technique will ensure that the PR is met, because clearing will not result in any of the erosion issues listed in the PR. Furthermore, the clearing will not result in any associated loss of chemical, physical or biological integrity. Rather, through the control of weed species, it will allow for the recruitment of the natural

erosion, wind erosion, or scalding; and b) any associated loss of chemical, physical or biological fertility— including, but not limited to water holding capacity, soil structure, organic matter, soil biology, and nutrients, within and/or outside the lot(s)that are the subject of the application.	the control of the non-native or declared plant or to the rabbit warren if no alternative route exists, unless the clearing is to control or provide access to an animal or plant declared as a class 1 or 2 pest under the Land Protection (Pest and Stock Route Management) Act 2002 for which there is a pest eradication plan in place and is carried out in accordance with that plan.	species in the regional ecosystem, promoting natural cover protecting the value of the land resource. In some situations, clearing for an access track may be required to allow for flying of the UAV and maintaining line of sight for the UAV. Where an access track is required, clearing will only occur to the extent necessary and will • only occur up to 4 metres wide; and • not cause accelerated soil erosion. <u>Proposed AMP condition</u> • **Access tracks are limited to 4 metres wide and must avoid causing accelerated soil erosion. Any access tracks that cross a <u>stream protection area</u> must be designed to cross perpendicular to the stream.** • **No soil disturbance is to occur in <u>wetland areas</u> or <u>stream protection areas</u> unless as a result of clearing for an access track.** • **Any vegetation debris from the control operations is to be left where it lays, unless it is required to be pushed to allow for access.**
PR W.5: Conserving remnant vegetation **that are regional ecosystems** To regulate the clearing of vegetation in a way that conserves remnant vegetation that are regional ecosystems, does not cause land degradation, prevents the loss of biodiversity and maintains ecological processes—clearing activities—	AS W.5 W.5.1 Clearing to control and/or provide access to an animal or plant declared as a class 1 or 2 pest under the Land Protection (Pest and Stock Route Management) Act 2002 occurs only— a) in accordance with a pest eradication plan; and b) to the extent necessary to provide access for the control of the class 1 or 2 pest if no alternative route exists. OR	Clearing will be carried out in highly weed infested areas. These weed species have been present for a minimum of 5 years, but potentially much longer (10 years plus), resulting in a significant modification to the natural community. Often the areas only contain mature vegetation, with minor or non-existent populations of understorey species. To ensure effective control of these areas and allow for natural recruitment of native species following control, current under storey native species will be affected by the control. However, long term, these areas, through the

a) maintain the natural floristic composition and range of sizes of each species of the regional ecosystem evenly spaced across the application area; and b) do not remove mature trees.	W.5.2 Where clearing is to control and/or provide access to a non-native or declared plant, clearing— a) to control the declared or non-native plant— i) must be in accordance with the limitations set out in Table 8; and ii) does not occur by the aerial application of root absorbed herbicides; and b) occurs only to the extent necessary to provide access for the control of the declared or non-native plant if no alternative route exists. OR W.5.3 Clearing to control a declared pest animal under the Land Protection (Pest and Stock Route Management) Act 2002 occurs only— a) within a 3 metre radius around each hole of a rabbit warren; and b) to the extent necessary to provide access to a rabbit warren if no alternative route exists.	removal of these weed species will contain suitable conditions for natural recruitment. To meet the PR, mature trees will not controlled by the UAV, by ensuring all chemical application is applied 30 metres outside the drip line. In relation to part a) of the PR - maintaining the natural floristic composition and range of sizes of each species of the RE will not be possible for two reasons, which include: • due to the difficulty of measuring the current status of understorey species at the sites. Because of access and health and safety issues, it will be unknown what the current floristic composition is; and • control operations will likely affect understorey species present both to allow for operational efficiency and because they cannot be seen by the UAV pilot in undertaking operations. However, carrying out weed control to promote the reestablishment of the native community will ensure that the purposes of the VMA, and subsequently the code are met. Removing existing native understorey species will result in a short term decrease to the current 'natural floristic composition'. However, at these sites the vegetation community is at a very low level of floristic composition because of the dominance of weed species, resulting in a site that is highly degraded. Once the weed species are controlled, this will allow for an increase in the 'natural floristic composition', improving the value of the area and increasing the biodiversity value of the

		site. Such a clearing proposal then, promotes the purposes of the VMA and the RVM code. In particular, by removing a significant threatening process to the community, the following purposes will be met: • conserving remnant vegetation; • prevents the loss of biodiversity; and • maintains and improves ecological processes. To meet part a) of the PR, it is therefore proposed that this AMP is not inconsistent with the regional vegetation management code for the plan area, because the outcome of this clearing will actually promote the purposes of the VMA, and subsequently the outcomes promoted by the RVM code. <u>Proposed AMP condition</u> • **Application of root absorbed herbicides is only to be applied outside 30 metres from the drip line of <u>mature trees</u> and is not to be applied on slopes greater than 5% or actively eroding sites. Applying root absorbed herbicides on low slopes allows any herbicide to disintegrate into the soil profile and be taken up by the target weed species following rainfall.** • **No <u>mature trees</u> are to be directly applied with foliar or basal barking herbicide.** • **No exotic species such as non-native pasture species are to be intentionally introduced by humans as a consequence of control operations.** **Aerial application of foliar applied herbicides is only permitted where it is registered for aerial application under a minor use permit, an emergency use permit or on the product label, and its application occurs strictly in accord**

		with the permit or label conditions
PR W.6: Requirements for dense regional ecosystems To regulate the clearing of vegetation in a way that conserves remnant vegetation that are regional ecosystems, prevents the loss of biodiversity and maintains ecological processes—removal of canopy vegetation does not occur in regional ecosystems listed in Table 9.	AS W.6 W.6.1 Clearing and associated soil disturbance in regional ecosystems listed in Table 9 occurs only— a) within a 1.5 metre radius from the base of the stem of individual non-native or declared plants or within a 3 metre radius around each hole of a rabbit warren; and b) to the extent necessary to provide access for the control of the non-native or declared plant or to the rabbit warren if no alternative route exists, unless the clearing is to control or provide access to an animal or plant declared as a class 1 or 2 pest under the Land Protection (Pest and Stock Route Management) Act 2002 for which there is a pest eradication plan in place and is carried out in accordance with that plan.	It is unlikely that any clearing will occur in Table 9 regional ecosystems However, in any clearing operation, no mature trees will be cleared. Where clearing occurs in a Table 9 regional ecosystem, and it contains canopy vegetation that does not meet the mature definition in this AMP, no clearing will occur. <u>Proposed AMP condition</u> • **Application of root absorbed herbicides is only to be applied outside 30 metres from the drip line of <u>mature trees</u> and is not to be applied on slopes greater than 5% or actively eroding sites. Applying root absorbed herbicides on low slopes allows any herbicide to disintegrate into the soil profile and be taken up by the target weed species following rainfall.** • **In <u>Table 9 Regional ecosystems</u>, any native canopy vegetation will not be cleared.**
PR W.7: Acid sulfate soils To regulate the clearing of vegetation in a way that does not cause land degradation and maintains ecological processes—clearing activities do not result in disturbance of acid sulfate soils or changes to the hydrology of the location that will either— a) aerate horizons containing iron sulfides; or	AS W.7 W.7.1 Clearing in land zone 1, land zone 2 or land zone 3 in areas below 5 metre Australian Height Datum— a) is carried out in accordance with an acid sulfate soils environmental management plan as outlined in the State Planning Policy 2/02 Guideline: Planning and Managing Development involving Acid Sulfate Soils; and	The clearing will occur only in inland areas and will not be subject to any coastal related land zones 1, 2 and 3. Furthermore, in the unlikely presence of Acid sulphate soil properties present in inland areas, there will be no soil disturbance associated with the clearing operation that would expose soil horizons containing iron sulphides, and thereby lead to mobilisation of acids and/or metals. This clearing proposal meets the PR.

b) mobilise acid and/or metals	b) follows management principles in accordance with the Soil Management Guidelines in the Queensland Acid Sulfate Soil Technical Manual unless the clearing is to control or provide access to an animal or plant declared as a class 1 or 2 pest under the Land Protection (Pest and Stock Route Management) Act 2002 for which there is a pest eradication plan in place and is carried out in accordance with that plan.	<u>Proposed AMP condition</u> • **Any vegetation debris from the control operations is to be left where it lays, unless it is required to be pushed to allow for access.**

Definitions

Mature trees are—

native trees and shrubs which are over the size limits specified below

- Eucaltypts, Corymbia, Angophora, Lophestemon - >30 cm at 1.3m diameter; and
- Genera other than Eucalypts, Corymbia, Angophora and Lophostemon - >20 cm at 1.3m diameter.

Table 9 Regional Ecosystems

- As listed in the Regional Vegetation Management code for Western Bioregions – version 2.1 – effective from 30 November 2012. Possible REs relevant to the area may include the following:
- 9.5.2 Semi-evergreen vine thicket on red kandosols on Tertiary plateaus
- 9.8.3 Semi-evergreen vine thicket on Quaternary basalt soils
- 9.8.7 Semi-evergreen vine thicket on cones, craters and rocky basalt flows with little soil development
- 9.11.8 Semi-deciduous vine thicket on limestone rock outcrops
- 9.11.9 Semi-deciduous vine thicket on metamorphic soils (not limestone)
- 9.12.8 Semi-evergreen vine thicket on rocky outcrops and shallow soils of acid volcanic rocks
- 9.12.34 Semi-evergreen vine thicket with Araucaria cunninghamii on steep hills on acid and intermediate volcanic rocks
- 10.3.29 Acacia torulosa shrubland or Triodia longiceps hummock grassland on weathered lake dunes
- 10.5.6 Shrublands on shallow earths, with species including Melaleuca tamariscina and Acacia leptostachya
- 11.4.6 Acacia cambagei woodland on Cainozoic clay plains
- 11.5.15 Semi-evergreen vine thicket on Cainozoic sand plains/remnant surfaces
- 11.10.8 Semi-evergreen vine thicket in sheltered habitats on medium to coarse-grained sedimentary rocks
- 11.11.5 Microphyll vine forest ± Araucaria cunninghamii on old sedimentary rocks with varying degrees of metamorphism and folding
- 11.12.4 Semi-evergreen vine thicket and microphyll vine forest on igneous rocks

- 11.12.18 Montane shrubland on igneous rocks. Mountain tops

Wetland areas

- The area
    - In and within 100 metres of a wetland; and
    - In and within 200 metres of a significant wetland.

- Where a wetland is the area of land that supports plants or is associated with plants that are adapted to and dependent on living in wet conditions for at least part of their life cycle, and that is—
    - a) a regional ecosystem listed Table 13 of the Regional Vegetation Management code for Western Bioregions – version 2.1 – effective from 30 November 2012; or
    - b) the area on the ground represented as a swamp, lake, marsh, waterhole, wetland, billabong, pool, spring or like represented on the most recent, finest scale—
        - i. Geoscience Australia topographic map or data that shows swamps, lakes, marshes, waterholes, wetlands, billabongs, pools, springs or like—which can be accessed at the following internet address: http://www.ga.gov.au/topographicmapping.html ; or
        - ii. topographic data that represents swamps, lakes, marshes, waterholes, wetlands, billabongs, pools, springs or like—which is publicly available from the Department of Natural Resources and Mines.
    - c) listed as an 'active' spring in the Queensland Springs Database, which can be accessed at the following internet address: www.dnrm.qld.gov.au

- Where a significant wetland the area of land that supports plants or is associated with plants that are adapted to and dependent on living in wet conditions for at least part of their life cycle and that is—
    - i. a regional ecosystem listed in Table 14 of the Regional Vegetation Management code for Western Bioregions – version 2.1 – effective from 30 November 2012 and the area on the ground is represented as a swamp, lake, marsh, waterhole, wetland, billabong, pool, spring or like, on the most recent 1:250 000 Geoscience Australia topographic map of the area;
      or
    - ii. a Ramsar wetland.

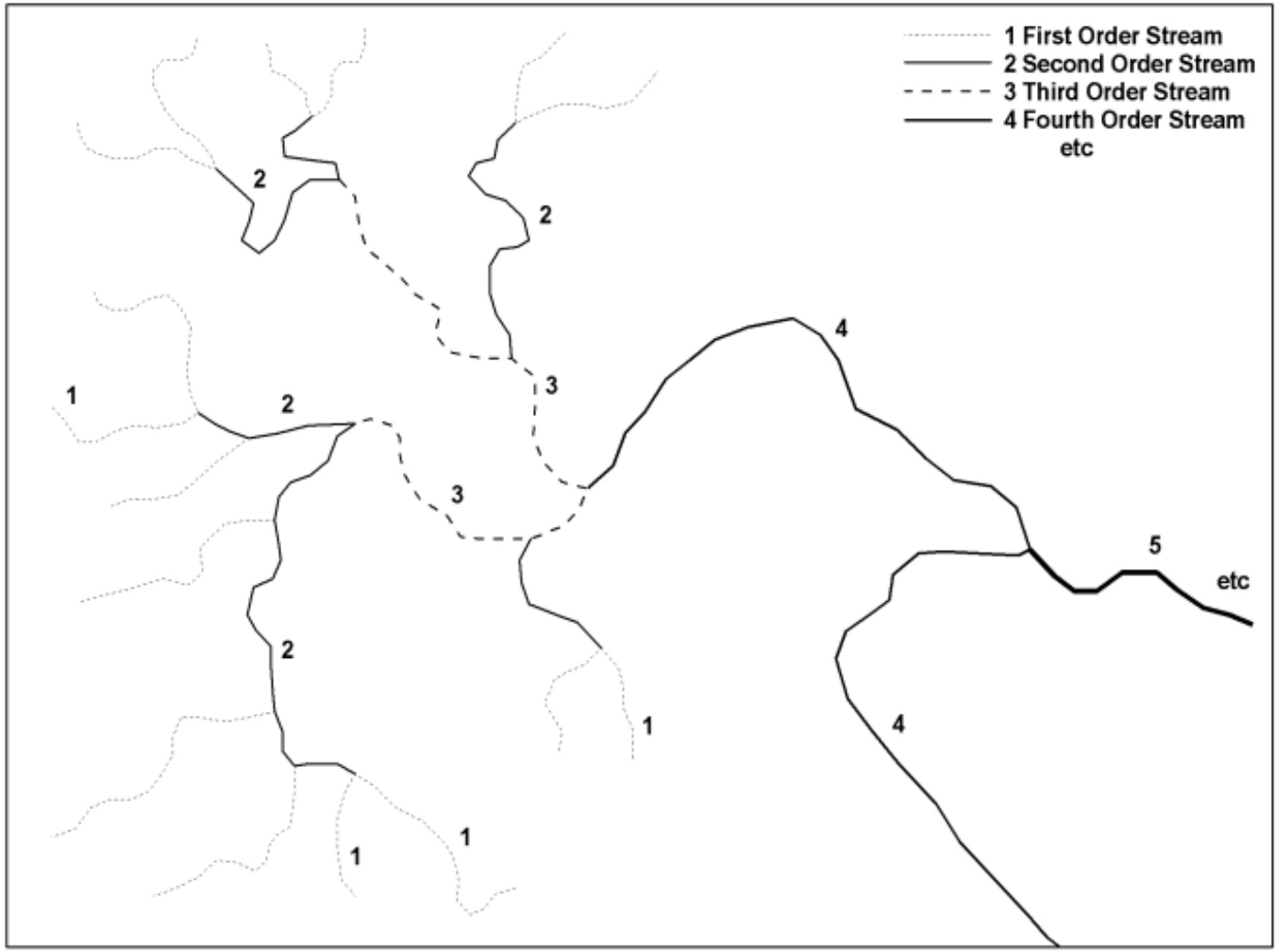
Stream Protection Area

- The area
    - In and within 200 metres from each high bank of each watercourse with a stream order 5 or greater; and

- In and within 100 metres from each high bank of each watercourse with a stream order 3 or 4; and
- In and within 50 metres from each high bank of each watercourse with a stream order 1 or 2.

- Where a watercourse is that shown on the Vegetation Management Watercourse Map.

- Where stream order is a numerical ordering classification of each watercourse segment according to its position within a catchment, as shown in below. Stream orders are determined using the vegetation management watercourse map.


1 First Order Stream
2 Second Order Stream
3 Third Order Stream
4 Fourth Order Stream
etc
2
2
4
1
2
3
3
5
etc
2
1
4
1
1
1