### Review of the Declared Pests of Western Australia 2016: 2017 Revision



**Review of the Declared Pests of Western Australia 2016: 2017 Revision**

# The Department of Primary Industries and Regional Development, Biosecurity and Regulation, Invasive Species Program

# September 2016 and December 2017

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Table of Contents

[Review of the Declared Pests of Western Australia 2016: 2017 Revision 1](#_Toc501028526)

[The Department of Primary Industries and Regional Development, Biosecurity and Regulation, Invasive Species Program 2](#_Toc501028527)

[September 2016 and December 2017 2](#_Toc501028528)

[Declared Pests in WA 4](#_Toc501028529)

[Purpose and Scope 4](#_Toc501028530)

[In Scope 5](#_Toc501028531)

[Out of Scope 5](#_Toc501028532)

[The following groups of organisms are out of the scope of this review: 5](#_Toc501028533)

[Review Process 6](#_Toc501028534)

[Review Recommendations 8](#_Toc501028535)

[Appendices 29](#_Toc501028536)

[References 30](#_Toc501028537)

[Appendix 1: Review of the Declared Pests of Western Australia (decision paper) 31](#_Toc501028538)

[Purpose 31](#_Toc501028539)

[Background 31](#_Toc501028540)

[Need for the Review 33](#_Toc501028541)

[Significant invasive species 33](#_Toc501028542)

[Declaration Reviews in Other Jurisdictions 34](#_Toc501028543)

[Strategic and Policy Context 34](#_Toc501028544)

[An Invasive Species Plan for WA 2015-2019 34](#_Toc501028545)

[Western Australia State Biosecurity Strategy 35](#_Toc501028546)

[The Generalised Invasion Curve 36](#_Toc501028547)

[Scope of the Review 38](#_Toc501028548)

[In Scope 39](#_Toc501028549)

[Out of Scope 39](#_Toc501028550)

[Proposals for new declarations 39](#_Toc501028551)

[Community-based groups 40](#_Toc501028552)

[Using the policy to review existing section 22(2) declared pests 42](#_Toc501028553)

[Proposed Governance Structure 53](#_Toc501028554)

[References 54](#_Toc501028555)

[Appendix 2: State Reference Group Members- Phase Two respondents 65](#_Toc501028556)

[Appendix 3: Public and Community Consultation- Phase Three Respondents 67](#_Toc501028557)

[Appendix 4: Stakeholder List- Contacted re involvement in the Review/State Reference Group 68](#_Toc501028558)

[Important disclaimer 75](#_Toc501028559)

## Declared Pests in WA

The *Biosecurity and Agriculture Management Act 2007* (BAM Act) and the associated *Biosecurity and Agriculture Management Regulations 2013* (BAM Regulations) allow for organisms to be declared as pests in all or part of the State and categorised into different control and keeping categories. The BAM Act places legal obligations on the landholder to undertake specific measures in relation to a declared pest.

Organisms may be declared as Pests if they have – or may have - an adverse effect on native organisms, the well-being of people, the natural environment, and/or the productivity of the state’s agricultural, forest, fishing or pearling industries.

Organisms may be declared as **Permitted organisms** (under section 11 of the BAM Act), **Prohibited organisms** (section 12) or **Declared Pests** (section 22(2)), or they can remain **unlisted** (section 14). Under section 22(1) of the BAM Act, all section 12 prohibited organisms are declared pests for the whole of Western Australia.

Declared pests (section 22(2)) may be categorised into the following control categories:

* exclusion (C1)
* eradication (C2)
* management (C3)

and can be further categorised into the following keeping categories:

* prohibited
* restricted
* exempt

Details of the currently declared pests are on the WA Organisms List (WAOL) which can be found [online (https://www.agric.wa.gov.au/bam/western-australian-organism-list-waol)](https://www.agric.wa.gov.au/bam/western-australian-organism-list-waol).

This review focused on the Declared Pests (section 22(2) of the BAM Act) known to be present in the State.

At the review’s commencement 105 qualifying Declared Pests were present in WA, comprising 44 vertebrate pests and 61 plant species.

The term ‘present’ as used in the BAM Act and related documents refers to pests that are known to occur in the state, such as when naturalised or in cultivation. Organisms held in the state under suitable biosecurity controls are not considered to be ‘present’ in the state.

### Purpose and Scope

The aim of the review is to provide the State with an up-to-date, rational and functional suite of declared pests that:

* meet the requirements of the BAM Act and BAM Regulations
* considers community, industry and landholder expectations
* are appropriate to regulatory bodies’ capacity for delivering compliance

The review determined whether this State’s declared plants and animals were declared and categorised appropriately.

Current declarations (prior to December 2014) were transferred to the Biosecurity and Agriculture Management regulations 2013 (BAM regulations) on a like-for-like basis from the *Agriculture and Related Resources Protection Act 1977* (ARRPA) declarations. The resulting BAM Act declared pest list largely reflects the previous ARRPA declarations; however, for some declared pests the circumstances and perceived risks that led to their declaration have changed since they were first declared over four decades ago.

The review assessed the declaration status of most declared weeds and vertebrate pests that are present in this state, excluding five species recently added. This resulted in 103 declared pests being subject to review. The assessments use the BAM Act criteria that determine whether or not an organism should be declared. Those criteria and the associated control and keeping categories, are explained in Appendix 1: Review of the Declared Pests of Western Australia - Position Paper. The decision making process outlined in that paper is presented in a flowchart form as Figure 1.

The five criteria for declared pests as applied in the review are:

The organism

* is identifiable,
* occurs in Western Australia,
* has potential for adverse effects,
* has potential for establishment or spread or increase in numbers, and
* is subject to current or planned regulatory activities

### In Scope

The review covers plant and vertebrate pest species that:

* are known to be present in the State,
* live on land or in freshwater bodies,
* are currently declared under the BAM Act as section 22(2) declared pests

### Out of Scope

## The following groups of organisms are out of the scope of this review:

* Opuntioid cacti (*Austrocylindroputia spp., Cylindropuntia spp*. and *Opuntia spp.)* were declared in December 2014, and *Galium spurium* and *G. aparine* in June 2015.
* Permitted species.
* Marine species, invertebrates, pathogens, and genetically modified organisms

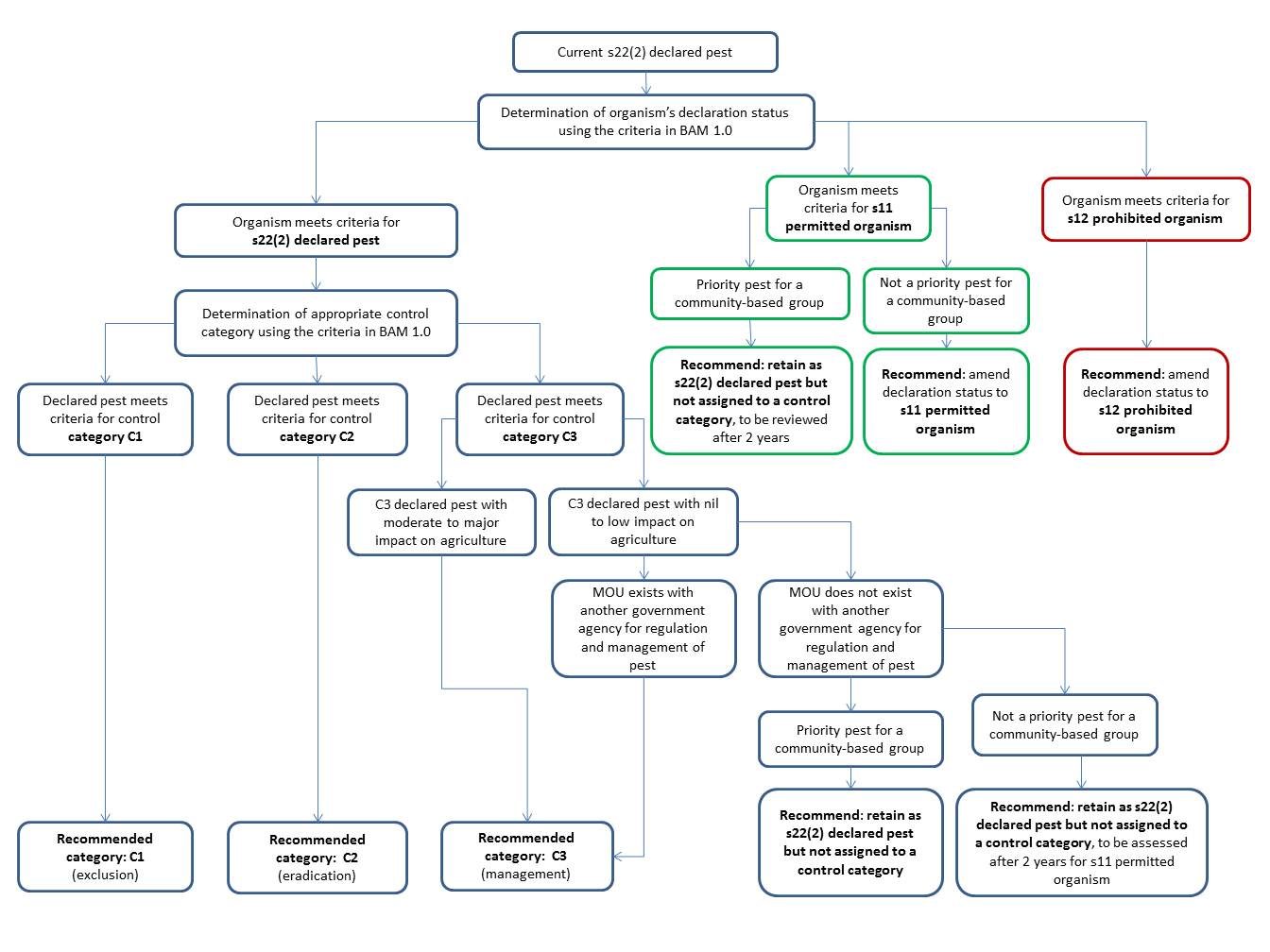
## Review Process

The processes for the review were developed with wide consultation. Local government, biosecurity groups and industry representative organisations were encouraged to participate in development of the review methods. The agreed methods include technical review, targeted stakeholder review and broader consultation. Based on these processes, a summary of the review assessments and corresponding stakeholder responses form the basis of this report to the Minister for Agriculture and Food for consideration and endorsement of recommended changes to the declaration status of currently declared species.

The agreed processes and review criteria are comprehensively covered in the publicly released discussion document entitled *Review of the Declared Pests of Western Australia* (Appendix One) and Figure One (Dodd & Loo, 2015) provides a flow diagram of the review process outlining how the final recommendations were reached. This process was addressed in three phases.

* Phase One: technical assessments were undertaken by DPIRD subject matter experts against criteria set out in the BAM Act 2007.
* Phase Two: feedback from Stakeholder Reference Group (SRG) members was provided
* Phase Three: outcomes from Phase one and two were circulated as part of the broader public consultation. Respondents were asked if they agreed with SRG feedback to the process.

A summary of the results are presented in this report. Documentation on the outcome of the consultation process, including stakeholders contacted over the course of the review and those who provided comment, and the resultant recommendations are presented in this document. Stakeholder groups and individuals offered a position on the State Reference Group (SRG), and those groups or individuals who responded to any part of the consultation are listed in appendices.

**Figure 1. Flowchart illustrating the process for applying the criteria and considerations from the BAM 1.0 policy (Anon 2015b) to the review of current section 22(2) declared pests (Dodd & Loo, 2015).**

## Review Recommendations

**Table 1: Review outcome requires no declaration category changes – Consultation in agreement with recommendations. Cells highlighted green show gazettal changes made on 17 Nov 2017**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Common Name** | **Scientific Name** | **Pre-Review status Declared Pest s.22(2)** | **Stage 1: Technical Assessment Recommendation** | **Stage 2: Stakeholder Reference Group Feedback** | **Stage 3: Industry & Community Consultation - 22 Respondents** | | **Gazetted Control Category, Area Declared and Keeping Status: 17 Nov 2017** | |
| **Agree** | **Disagree** |
| **Animals** (**N**) = Native to Western Australia | | | | | | |  |  |
| little corella Kimberley (**N**) | *Cacatua sanguinea sanguinea* | C1, C3 | Change in areas declared  C3 – Areas outside natural range where recorded present; Perth Metro area, City of Mandurah, Bunbury, Albany, and Kalgoorlie, Shires of Busselton, Murray, Waroona, Harvey, Dardanup, Capel, Donnybrook-Balingup, Augusta-Margaret River, Denmark, Wyndham-East Kimberley, Derby-West Kimberley. | Agreed | Agreed |  | Declared pest s.22: C1 Whole of State where not naturally occurring.  C3 Areas outside of natural range where recorded present; Perth Metro area, City of Mandurah, Bunbury, Albany, and Kalgoorlie, Shires of Busselton, Murray, Waroona, Harvey, Dardanup, Capel, Donnybrook-Balingup, Augusta-Margaret River, Denmark, Wyndham-East Kimberley, Derby-West Kimberley – Exempt Keeping | |
| little corella Pilbara (**N**) | *Cacatua sanguinea westralensis* | C1, C3 | Option no control category  Add Mullewa | Agreed | Agreed |  | Declared pest s.22: C1 Whole of state where not naturally occurring.  C3 Areas outside of natural range where recorded present; Perth Metro area, Shires of Busselton, Carnarvon, Greater Geraldton, Irwin, Three Springs, Morawa, Mullewa, Perenjori, Mingenew. – Exempt Keeping | |
| feral camel | *Camelus dromedarius* (feral) | C3 | Change to keeping category from Restricted to Exempt | Agreed | Agreed | Two disagreed about keeping requirements | Exempt Keeping | |
| dingo (**N**) | *Canis dingo* | C3 | Change in area from whole of state Agriculture and pastoral regions of the State | Agreed | Agreed | Two disagreed about keeping requirements | No Change | |
| dingo-dog hybrids | *Canis dingo x Canis lupus familiaris* | C3 | No Change | Agreed | Agreed | One disagreed | No Change | |
| feral dog | *Canis lupus familiaris* (feral) | C3 | No Change | Agreed | Agreed | One disagreed | No Change | |
| feral goat | *Capra hircus* (feral) | C3 | Keeping category from Restricted to Exempt | Agreed | Agreed | One disagreed about keeping requirements | Exempt Keeping | |
| red deer, elk | *Cervus elaphus* | C3 | No Change | Agreed | Agreed | One disagreed | No Change | |
| fallow deer | *Dama dama* | C3 | No Change | Agreed | Agreed | One disagreed | No Change | |
| emu (**N**) | *Dromaius novaehollandiae* | C3 | No Change | Agreed | Agreed |  | No Change | |
| feral donkey | *Equus asinus* (feral) | C3 | Keeping category from Restricted to Exempt | Agreed | Agreed | One disagreed | Declared pest s.22: C3 Whole of state – Exempt Keeping | |
| feral horse | *Equus caballus* (feral) | C3 | No Change | Agreed | Agreed | One disagreed | No Change | |
| Asian house gecko | *Hemidactylus frenatus* | C1, C3 | No Change | Agreed | Agreed |  | No Change | |
| agile wallaby (**N**) | *Macropus agilis* | C3 | No Change | Agreed | Agreed |  | No Change | |
| ring-necked pheasant | *Phasianus colchicus* | C1, C3 | No Change | Agreed | Agreed |  | No Change | |
| feral pig | *Sus scrofa* (feral) | C3 | No Change | Agreed | Agreed |  | Declared pest s.22: C3 Whole of state – Prohibited Keeping | |
| rainbow lorikeet (**N**) | *Trichoglossus* spp. | C1, C3 | Change the declaration from the taxon level super species *Trichoglossus haematodus* to the subspecies level.  *Trichoglossus haematodus moluccanus* Declared pest s 22(2) - C3 Perth Metro area  C1 elsewhere  and  *Trichoglossus haematodus rubritorquis*  Declared pest s 22(2) - C3 Perth Metro area;  C1 South of 20oS latitude | Agreed | Agreed |  | No Change | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Plants** | | | | | | | |
| camelthorn | *Alhagi maurorum* | C3 | No Change | Agreed | Agreed |  | No Change |
| hydrocotyl | *Hydrocotyle ranunculoides* | C3 | No Change | Agreed | Agreed |  | No Change |
| bellyache bush | *Jatropha gossypiifolia* | C3 | No Change | Agreed | Agreed |  | No Change |
| lantana | *Lantana camara* | C3 | No Change | Agreed | Agreed |  | No Change |
| water lettuce | *Pistia stratiotes* | C2 | No Change | Agreed | Agreed |  | No Change |
| mesquite | *Prosopis glandulosa x velutina* | C2, C3 | No Change | Agreed | Agreed |  | No Change |
| sagittaria | *Sagittaria platyphylla* | C3 | No Change | Agreed | Agreed |  | No Change |
| gorse | *Ulex europaeus* | C2, C3 | No Change | Agreed | Agreed |  | No Change |
| Bathurst burr | *Xanthium spinosum* | C2, C3 | No Change | Agreed | Agreed |  | No Change |
| Noogoora burr | *Xanthium strumarium* | C2, C3 | No Change | Agreed | Agreed |  | No Change |
| jujube | *Ziziphus mauritiana* | C3 | No Change | Agreed | Agreed |  | No Change |

Table 1 comprises all the declared pests for which the review recommended no changes be made to the current declaration and both consultation phases agreed with this recommendation.

**Table 2a: Consultation feedback disagrees with aspects of the technical review recommendations – recommendation to adhere to technical review recommendations. Cells highlighted green show gazettal changes made on 17 Nov 2017**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Common Name** | **Scientific Name** | **Pre-Review status Declared Pest s.22(2)** | **Stage 1: Technical Assessment Recommendations** | | | | **Stage 2: Stakeholder Reference Group (SRG) Feedback** | **Stage 3: Industry & Community Consultation - 22 Respondents** | | **Declaration Status as of: 17 Nov 2017** |
| **Status** | **Section** | **Control** | **Keeping** | **Agree with SRG** | **Disagree with SRG** |
| **Animals (N) = Native to Western Australia** | | | | | | | | | |  |
| Australian ringneck, 28 parrot (**N**) | *Barnardius zonarius* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed | One supported the technical review outcome | Permitted s.11 |
| wood duck (**N**) | *Chenonetta jubata* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed | One supported the technical review outcome | Permitted s.11 |
| Australian raven (**N**) | *Corvus coronoides* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed | One supported the technical review outcome | Permitted s.11 |
| western grey kangaroo (**N**) | *Macropus fuliginosus* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed |  | Permitted s.11 |
| euro (**N**) | *Macropus robustus erubescens* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed | One supported the technical review outcome | Permitted s.11 |
| red kangaroo (**N**) | *Macropus rufus* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed | One supported the technical review outcome | Permitted s.11 |
| Australian shelduck (**N**) | *Tadorna tadornoides* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed | One supported the technical review outcome | Permitted s.11 |
| silvereye (**N**) | *Zosterops lateralis* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed | One supported the technical review outcome | Permitted s.11 |
|  |  |  |  |  |  |  |  |  |  |  |
| ostrich | *Struthio camelus* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed |  | Permitted s.11 |

There are important points to consider regarding the review recommendations to remove the Declared Pest status of the animals listed in Table 2a above:

1. The species in Table 2a do not meet the criteria for declaration as declared pests under the BAM Act (2007).
2. DPIRD does not engage in any control or regulatory activities for native birds. The Department of Biodiversity, Conservation and Attractions have previously requested that DPIRD change the status of these species to Permitted so there is less public confusion about the status of native species and the department responsible for the management of native animals. Removing these species from the list of declared pests will improve clarity that the legislative management responsibility of these species rests with the Department of Biodiversity, Conservation and Attractions.
3. Stakeholders raised concerns about their inability to control these native species if they are declared as permitted species. The management of these native species under legislation managed by the Department of Biodiversity, Conservation and Attractions is independent of their status under the BAM Act. Department of Biodiversity, Conservation and Attractions respond to situations where native species are causing damage either by declaring open seasons or by the issuing of damage licences in areas not covered by open season notices. These provisions are contained in the Wildlife Conservation Act 1950 (WC Act) and the Wildlife Conservation Regulations 1970. The application of these provisions is not dependent upon such fauna being a declared pest under the BAM Act. Under the WC Act the definition of ‘take’ includes ‘to disturb or molest’ so the use of non-lethal scaring methods can only be carried out with a licence issued by the Department of Biodiversity, Conservation and Attractions. Damage licences are issued by the Department of Biodiversity, Conservation and Attractions for situations of genuine damage to agriculture crops by native animals.

The ostrich does not meet the criteria for a declared pest under the review’s criteria. The ostrich is not present in the wild in WA despite ostrich farming having a long standing presence in the state, and the ostrich is treated as livestock. There is no case for the species listing as a declared pest.

**The final recommendation to the minister for the animals listed in Table 2a is to change the declaration status from declared pest (s. 22(2) C3) to permitted (s.11).**

**Table 2b: Consultation feedback disagrees with the technical review recommendations. Cells highlighted green show gazettal changes made on 17 Nov 2017**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Common Name** | **Scientific Name** | **Pre-Review status Declared Pest s.22(2)** | **Stage 1: Technical Assessment Recommendations** | | | | **Stage 2: Stakeholder Reference Group (SRG) Feedback** | **Stage 3: Industry & Community Consultation - 22 Respondents** | | **Gazetted Control Category, Area Declared and Keeping Status - 17 Nov 2017** |
| **Status** | **Section** | **Control** | **Keeping** |  | **Agree with SRG** | **Disagree with SRG** |  |
| **Plants** | | | | | | | | | | |
| skeleton weed | *Chondrilla juncea* | C2, C3 | Declared pest | s.22(2) | C3 | Exempt | Retain as s.22(2) C2, C3 | Agreed |  | No Change |
| purple rubber vine | *Cryptostegia madagascariensis* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed |  | Declared pest s.22: - No Control Category Whole of State – Exempt Keeping |
| Paterson’s curse | *Echium plantagineum* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed |  | Declared pest s.22: - No Control Category Whole of State – Exempt Keeping |
| cotton bush | *Gomphocarpus fruticosus* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed |  | No Change |
| cape tulips (one-leaf & two-leaf) | *Moraea flaccida* & *Moraea miniata* | C3 | Permitted | s.11 | None | Exempt | Agreed | Agreed | Six disagree some for environmental reasons. Eight agreed | Declared pest s.22: No Control Category Whole of State – Exempt Keeping |
| stemless thistle | *Onopordum acaulon* | C3 | Permitted | s.11 | None | Exempt | Agreed | Agreed | One disagreed | Declared pest s.22: No Control Category Whole of State – Exempt Keeping |
| candle bush & sicklepod | *Senna alata* & *Senna obtusifolia* | C3 | Permitted | s.11 | None | Exempt | Agreed | Agreed | One disagreed | Declared pest s.22: No Control Category Whole of State – Exempt Keeping |
| variegated thistle | *Silybum marianum* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed |  | Declared pest s.22: - No Control Category Whole of State – Exempt Keeping |
| silverleaf nightshade | *Solanum elaeagnifolium* | C3 | Permitted | s.11 | None | Exempt | Agreed | Agreed | Three disagreed | Declared pest s.22: No Control Category Whole of State – Exempt Keeping |
| apple of Sodom | *Solanum linnaeanum* | C3 | Permitted | s.11 | None | Exempt | Retain as s.22(2) C3 | Agreed |  | Declared pest s.22: - No Control Category Whole of State – Exempt Keeping |

Several of the species listed in Table 2b above have a range of concerns and issues expressed by various groups across the state. Skeleton weed and cotton bush will be discussed individually, the remainder as a group.

**Skeleton Weed**

Currently skeleton weed is a declared pest in the C2 category (Eradication) for all WA shires except two, Narembeen and Yilgarn where it is listed as C3 (Management) category. There have been numerous external reviews (listed below) of the skeleton weed control program over the last 20 years and these reviews have clearly and consistently stated that the eradication of skeleton weed from the state is no longer possible.

On this basis alone there is no technical justification for the continued maintenance of a C2 category for skeleton weed. However a C3 category does not prevent the program itself from aiming for maximum efficacy within its operational activities.

The skeleton weed program is well supported by producers through the Grains, Seed and Hay Industry Funding Scheme, operating across the known infested areas of the southwest. Whilst there is concern from stakeholders about a change in control category from C2 to C3 state-wide, this would not change the function or capabilities of the program itself and should provide for a level of flexibility within the program to deal with organic growers and other pesticide-free operations around the state.

The technical review recommendation was to change the control category of skeleton weed to C3 for the whole of State.

**The final recommendation to the Minister was to retain the existing declaration status pending further consultation with the Industry Management Committee of the Grains, Seed and Hay Industry Funding Scheme.**

**Skeleton weed Eradication Program reviews cited in the technical review:**

Anon (1999) Skeleton Weed Eradication Program, 1999 Operational Review. Agriculture Protection Board and Agriculture Western Australia (59 pp.).

Roush, R., Gill, G., Groves, R. and Jones, R. (2000). *External Scientific Review of the Skeleton Weed Eradication Program*. Cooperative Research Centre for Weed Management Systems (8pp.).

Anon (2002). Skeleton Weed Eradication Program Ministerial Review 2002. Submission to the Review. Department of Agriculture Western Australia and The Agriculture Protection Board of Western Australia (47 pp.).

SWRP (2008). Skeleton Weed Review. Report of the Skeleton Weed Review Panel (52 pp.).

DPIRD (2015) Skeleton Weed Review. 2013 Industry Funding Scheme (IFS) skeleton weed survey Department of Agriculture and Food, Western Australia website URL: https://www.agric.wa.gov.au/bam/skeleton-weed-review?nopaging=1

**Cotton bush**

Cotton bush is a high priority species for some community groups in southwest WA. This review highlighted the significant community support for ongoing control from some stakeholders.

The technical review of cotton bush outlines why cotton bush fails to meet the technical assessment criteria of a Declared Pest and it does not feature on the priority list for Invasive Species staff operational activities. Cotton bush is present on over 1700 properties, where nearly 80% of the infestations are less than 1 ha in size (Reeves, 2014). The documented low economic return for any work conducted on this species further reinforces this position (Cook, 2013). The technical review’s original recommendation was to remove the Declared Pest status for cotton bush and declare it a Permitted Organism under section 11 of the BAM Act (2007) as it did not meet the assessment criteria of a declared pest.

Ministerial direction to date has supported DPIRD’s involvement in ongoing activity for cotton bush in the south-west of the State and at the time of report writing, the involvement of local government officers in regulatory activities was being explored for the south-west. Cotton bush has previously been identified as a high profile species in the southwest of the state (Loo & Reeves, 2015) and feedback from community groups during this review has supported this view.

The review mechanism allows for any species determined to be a permitted organism that is identified as a high profile species (due to community support) to retain its status as a section 22(2) Declared Pest, under a No Control Category option (Appendix 1: Dodd & Loo, 2015, see Figure 1, green boxes).

The No Control Category option is unpopular amongst community groups and Recognised Biosecurity Groups, however, as they see the lack of the control category as removing the ability to enforce compliance. Recognised Biosecurity Groups are able to fund and co-ordinate control activities for species they see as their priority by raising funds through a rating mechanism and obtaining matching funds from government. The funding mechanism does require such species to be Declared Pests, but further consultation is required to manage expectations for DPIRD’s involvement in compliance activities for a species which has minimal agricultural impact. In view of the priority placed on this species by interest groups, the original recommendation has been revised.

**The final recommendation to the Minister was to retain the existing declaration status pending further consultation.**

**Purple rubber vine, Paterson’s curse, variegated thistle, apple of Sodom and others.**

Purple rubber vine is a minor weed of the Kimberley region which, while related to the more significant Declared Pest species rubbervine (*Cryptostegia grandiflora* R.Br.), does not have the same capabilities despite being present for some time and having no history as a problematic weed of agriculture. Concerns about this species mainly revolve around its visual similarity to its close weedier relative. Listing this species as a permitted organism also does not prevent groups from controlling it, either mistakenly as rubbervine or as an unwanted weed in its own right, it does however remove the obligation to do so. Paterson’s curse, variegated thistle and apple of Sodom are all widespread weeds of the southwest of the state that do not meet the criteria for a declared pest as identified in the technical reviews.

Like many of the most widespread weeds in the state the agricultural management of all four species is best determined by the individual land holder as defined by their particular farming operations. For such widespread species, of which none are a high priority for DPIRD (Loo & Reeves, 2015), reducing regulatory involvement allows DPIRD to focus on more significant Declared Pest species as defined by its operational priority plans.

Any species determined to be a permitted organism (by technical review) but is identified as a high profile species may retain their status as a section 22(2) Declared Pest, under a No Control Category option (Dodd & Loo, 2015, see Figure 1, green boxes).

The Stakeholder Reference Group and community consultation support retaining it as a declared pest i.e. s. 22(2) C3.

For the four species in Table 2b (purple rubber vine, Paterson’s curse, variegated thistle and Apple of Sodom) the recommendation is to retain declared pest status (s. 22(2) and change the control category to No Control Category. This allows Biosecurity Groups recognised under s.169 under the *Biosecurity and Agriculture Management Act 2007* (BAM Act) to access funds in the declared pest account for the purposes under s.138a if desired, but removes any requirement for DPIRD to undertake compliance activities for these species.

**The final recommendation to the Minister was to gazette these species as s.22 – No Control Category – Whole of State, with Exempt keeping.**

**Table 3a: Review recommends declaration changes – Majority of consultation in agreement with recommended changes. Cells highlighted green show gazettal changes made on 17 Nov 2017**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Common Name** | **Scientific Name** | | **Pre-Review status Declared Pest s.22(2)** | **Stage 1: Technical Assessment Recommendations\*** | | | | | **Stage 2: Stakeholder Reference Group (SRG) Feedback** | | **Stage 3: Industry & Community Consultation - 22 Respondents** | | | | **Gazetted Control Category, Area Declared and Keeping Status 17 Nov 2017** | | | |
| **Status** | **Section** | **Control** | | **Keeping** |  | **Agree with SRG** | | **Disagree with SRG** | |  | | | |
| **Animals** (**N**) = Native to Western Australia | | | | | | | | | | | | | | | |  | | | |
| **Changes to Control Category, Areas of Control and Keeping** | | | | | | | | | | | | | | | |  | | | |
| sulphur-crested cockatoo (**N**) | *Cacatua galerita* | | C1 | Declared pest | s.22 | C1 South of 20 latitude, C2 Shires of Chittering, Mandurah, Murray, Waroona, and Swan (between Bullsbrook and Guildford) | | Restricted | Agreed | | Agreed | |  | | | No Change | | | | |
| Butler's corella (**N**) | *Cacatua pastinator butleri* | | C3 | Declared pest | s.22 | C1 Whole of State where not naturally occurring, C3 Areas outside natural range where present - Shires of Greater Geraldton, Dalwallinu, Irwin, Mingenew, Morawa, Mullewa, Perenjori, Three Springs, Wyndham-East Kimberley, Derby-West Kimberley Busselton and Perth metropolitan | | Exempt | Agreed | | Agreed | |  | | | Declared pest s.22: C1 Whole of State where not naturally occurring, C3 Shires of Greater Geraldton, Dalwallinu, Irwin, Mingenew, Morawa, Mullewa, Perenjori, Three Springs, Busselton and Perth metropolitan areas outside natural range where present – Exempt Keeping | | | | |
| Muir's corella (**N**) | *Cacatua pastinator pastinator* | | C3 | Declared pest | s.22 | C1 Whole of State where not naturally occurring, C3 Southwest land division where not native - shires of Boyup Brook, Cranbrook, Manjimup  Option of no control category | | Exempt | Agreed | | Agreed | | One disagreed | | | Declared pest s.22: C1 Whole of State where not naturally occurring, C3 Southwest land division where not native - shires of Boyup Brook, Cranbrook, Manjimup – Exempt Keeping | | | | |
| galah (**N**) | *Eolophus roseicapilla* | | C3 | Declared pest | s.22 | None | | Exempt | Agreed | | Agreed | |  | | | Declared pest s.22: No Control Category – Exempt Keeping | | | | |
| ferret | *Mustela putorius furo* | | C3 | Declared pest | s.22 | C1 Whole of State when at large uncontrolled in the wild and WA off-shore islands | | Exempt | Agreed | | Agreed | |  | | | Declared pest s.22: C1 When at large uncontrolled in the wild and WA off-shore islands – Exempt Keeping | | | | |
| domestic rabbit or commercial breeds | *Oryctolagus cuniculus* (domestic) | | C3 | Declared pest | s.22 | C1 WA Off-shore islands, C3 When feral living in the wild | | Exempt | Agreed | | Agreed | |  | | | No Change | | | | |
| wild rabbit only with wild-type brown colouring | *Oryctolagus cuniculus* (feral) | | C3 | Declared pest | s.22 | C1 WA Off-shore islands, C3 Whole of State | | Prohibited | Agreed | | Agreed | |  | | | No Change | | | | |
| flowerpot snake | *Ramphotyphlops braminus* | | C1, C3 | Declared pest | s.22 | C3 Whole of State  Option no control category | | Prohibited | Agreed | | Agreed | |  | | | Declared pest s.22: No Control Category – Prohibited Keeping | | | | |
| cane toad | *Rhinella marina* prev. (*Bufo marinus*) | | C3 | Declared pest | s.22 | C1 (S of 20°S latitude) | | Prohibited | Agreed | | Agreed | |  | | | Declared pest s.22: C1 (S of 20°S latitude) – Prohibited Keeping | | | | |
| red fox | *Vulpes vulpes* | | C3 | Declared pest | s.22 | C1 WA Off-shore islands, C3 Whole of State | | Prohibited | Agreed | | Agreed | |  | | | Declared pest s.22: C1 WA Off-shore islands, C3 Whole of State – Prohibited Keeping | | | | |
| **Change of Declared Pest Status to Permitted Organism** | | | | | | | | | | | | | | | |  | | | |
| Baudin’s cockatoo (**N**) | *Calyptorhynchus baudinii* | | C3 | Permitted | s.11 | None | | Exempt | Agreed | | Agreed | |  | | | Permitted s.11 | | | | |
| WA king parrot, red-capped parrot (**N**) | *Purpureicephalus spurius* | | C3 | Permitted | s.11 | None | | Exempt | Agreed | | Agreed | |  | | | Permitted s.11 | | | | |
| long-haired rat (**N**) | *Rattus villosissimus* | | C3 | Permitted | s.11 | None | | Exempt | Agreed | | Agreed | |  | | | Permitted s.11 | | | | |
| **Change of Declared Pest Status to Prohibited Organism** | | | | | | | | | | | | | | | |  | | | |
| water buffalo | *Bubalus bubalis* | | C1, C3 | Prohibited | s.12 | C1 Whole of State | Prohibited (N of 20°S latitude) - Restricted (S of 20°S latitude) | | Agreed | | Agreed | |  | | | | Prohibited s.12: C1 Whole of State - Prohibited Keeping north of 20°S Latitude and Restricted Keeping south of 20°S latitude | | | |
| northern palm squirrel | *Funambulus pennantii* | | C1, C3 | Prohibited | s.12 | C1 Whole of State, C2 City of South Perth | Prohibited | | Agreed | | Agreed | |  | | | | Prohibited s.12: C1 Whole of the State, C2 City of South Perth – Prohibited Keeping | | | |
| rusa deer | *Cervus timorensis* | | C1 | Prohibited | s.12 | C1 Whole of State | Prohibited | | Agreed | | Agreed | |  | | | | Prohibited s.12: C1 Whole of State – Prohibited Keeping | | | |
| European starling, common starling | *Sturnus vulgaris* | | C1, C2 | Prohibited | s.12 | C1 Whole of State, C2 Shires of Esperance and Ravensthorpe | Prohibited | | Agreed | | Agreed | |  | | | | Prohibited s.12: C1 Whole of State, C2 Shires of Esperance and Ravensthorpe – Prohibited Keeping | | | |
|  | | | | | | | | | | | | | | | |  | | | |
| **Plants** | | | | | | | | | | | | | | | |  | | | |
| **Changes to Control Category** | | | | | | | | | | | | | | | |  | | | |
| golden dodder | | *Cuscuta campestris* | C2, C3 | Declared pest | s.22 | C3 Whole of State | Exempt | | Agreed | | Agreed | | One disagreed | | | | Declared pest s.22: C3 Whole of State – Exempt Keeping | | | |
| parrot's feather | | *Myriophyllum aquaticum* | C2 | Declared pest | s.22 | C3 Whole of State | Prohibited | | Agreed | | Agreed | |  | | | | Declared pest s.22: C3 Whole of State – Prohibited Keeping | | | |
| parkinsonia | | *Parkinsonia aculeata* | C1, C3 | Declared pest | s.22 | No Control Category | Exempt | | Agreed | | Agreed | |  | | | | Declared pest s.22: No Control Category – Exempt Keeping | | | |
| blackberries | | *Rubus* spp.(*anglocandicans, laudatus, rugosus* & *ulmifolius*) | C1, C2, C3 | Declared pest | s.22 | C3 Whole of State | Exempt | | Agreed | | Agreed | | One disagreed | | | | Declared pest s.22: C3 Whole of State – Exempt Keeping | | | |
| **Change of Declared Pest Status to Permitted Organism** | | | | | | | | | | | | | | | |  | | | |
| Mexican poppy | | *Argemone ochroleuca****#*** | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | Two disagreed | | | | Permitted s.11 | | | |
| African thistle | | *Berkheya rigida* ***#*** | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | Two disagreed | | | | Permitted s.11 | | | |
| saffron thistle | | *Carthamus lanatus* ***#*** | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | Two disagreed | | | | Permitted s.11 | | | |
| glaucous star thistle | | *Carthamus leucocaulos****#*** | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | Two disagreed | | | | Permitted s.11 | | | |
| field bindweed | | *Convolvulus arvensis* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | One disagreed | | | | Permitted s.11 | | | |
| artichoke thistle | | *Cynara cardunculus* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | Two disagreed | | | | Permitted s.11 | | | |
| thornapples | | *Datura* spp.(*ferox, inoxia, leichhardtii, metel, stramonium* & *wrightii*) | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | One disagreed | | | | Permitted s.11 | | | |
| doublegee | | *Emex australis* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | Four disagreed | | | | Permitted s.11 | | | |
| lesser jack | | *Emex spinosa* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | One disagreed | | | | Permitted s.11 | | | |
| heliotrope | | *Heliotropium europaeum* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | |  | | | | Permitted s.11 | | | |
| St. John's wort | | *Hypericum perforatum* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | |  | | | | Permitted s.11 | | | |
| horehound | | *Marrubium vulgare* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | |  | | | | Permitted s.11 | | | |
| willows (white, pussy, chilean, common, corkscrew, basket & golden weeping) | | *Salix* spp.(*alba, caprea, chilensis, cinerea, matsudana, viminalis* &x *chrysocoma)* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | Four disagreed | | | | Permitted s.11 | | | |
| mintweed | | *Salvia reflexa* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | One disagreed, environmental reasons | | | | Permitted s.11 | | | |
| spinyhead sida | | *Sida acuta* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | One disagreed | | | | Permitted s.11 | | | |
| flannel weed | | *Sida cordifolia* | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | One disagreed | | | | Permitted s.11 | | | |
| **Changes to Control Category II** | | | | | | | | | | | | | | | |  | | | |
| calotropis | | *Calotropis procera****#*** ***#*** | C3 | Permitted | s.11 | None | Exempt | | Agreed | | Agreed | | Two disagreed | | | | Originally recommended and gazetted as: Permitted s.11 – then revised to a Declared pest s.22: No Control Category – Exempt Keeping | | | |

* \* The green cells are the review recommended changes
* ***#***These five species were gazetted as Permitted Organisms on December the 8th 2015
* ***#*** ***#*** This species was gazetted as a Permitted Organism on December 8th 2015, reviewed after further feedback regazetted as a Declared Pest NCC on Nov 17th 2017

Where there are disagreements to the review recommendations in the phase three consultation feedback these have been noted in the far right column. For those species where the disagreement was due to environmental concerns this is also noted. In all recommendations, whilst rarely obtaining universal approval, the majority of respondents were in favour of all of the Stakeholder Reference Group recommended changes across both phase two and three.

One respondent disagreed with the recommended exempt keeping category for the native bird species, preferring them to be assigned to either restricted or prohibited keeping category. Department of Biodiversity, Conservation and Attractions issue keeping permits for these native birds under the Wildlife Conservation Act and there is no justification for their keeping to be also regulated under the BAM Act. Additionally, prohibited keeping category species cannot be held in private aviculture and these species are already widely held in aviculture.

The water buffalo, European starling and rusa deer have been upgraded from a declared pest under section 22 to prohibited organisms under section 12 of the BAM Act (2007). This reflects the technical reviews outcome that these species were inappropriately declared against the criteria and the threat posed was enough to warrant the recommended change.

**Table 3b: Review recommends declaration changes – Consultation in general agreement with recommendations. Cells highlighted green show gazettal changes made on 17 Nov 2017**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Common Name** | **Scientific Name** | **Pre-Review status Declared Pest s.22(2)** | **Stage 1: Technical Assessment Recommendation** | | | | **Stage 2: Stakeholder Reference Group (SRG) Feedback** | **Stage 3: Industry & Community Consultation - 22 Respondents** | | **Gazetted Control Category, Area Declared and Keeping Status 17 Nov 2017** |
| **Status** | **Section** | **Control** | **Keeping** | **Agree with SRG** | **Disagree with SRG** |
| **Plants** | | | | | | | | | |  |
| **bridal creeper** | *Asparagus asparagoides* | C3 | Declared pest | s.22 | No Control Category | Exempt | Agreed | Agreed | Two disagreed - Environmental reasons | Declared pest s.22: No Control Category – Exempt Keeping |
| **athel pine** | *Tamarix aphylla* | C3 | Declared pest | s.22 | No Control Category | Exempt | Agreed | Agreed | Two disagreed - Undeclare species | Declared pest s.22: No Control Category – Exempt Keeping |
| **arum lily** | *Zantedeschia aethiopica* | C3 | Declared pest | s.22 | No Control Category | Exempt | Agreed | Agreed | One disagreed - Environmental reasons | Declared pest s.22: No Control Category – Exempt Keeping |

These three plant species, bridal creeper, athel pine and arum lily, have a secondary ‘No Control Category’ option listed in the table above. None of the three species in Table 3b are considered High Priority by the DPIRD Invasive Species Program (Loo & Reeves, 2015) however the review does recognise and can respond to public concern issues in this area (Dodd & Loo, 2015).

For these species to remain declared pests within the C3 control category a suitable sponsoring government department would need to be found. In the absence of sponsorship, the technical review recommendations are:

* to maintain their status as declared pests under section 22(2), with no control category, or
* declare these species as permitted organisms under section 11.

The permitted organism option is unpopular with some groups and a number have lobbied strongly to maintain the declared pest status. The groups working on arum lily and bridal creeper are in primarily environmental situations, similarly a group is working on an athel pine infestation in the Carnarvon region. DPIRD has a minimal regulatory or compliance role with these species and the environmental impacts fall outside of its mandate.

The technical review recognises that while these species do not meet the criteria of a declared pest, there is a place for operational activities to be conducted by other groups and the BAM Act can provide them with a funding mechanism (Dodd & Loo, 2015). In the interest of allowing recognised Regional Biosecurity Groups the ability to access funding for the management of these species, the preferred option would be to maintain their declared pest status under section 22(2), but with no control category. The report recommendation is to maintain declared pest status under section 22(2) for these three species, but with no control category.

**Recommended Changes were gazetted on 17th November 2017.**

## Appendices

Appendix 1:

Dodd, J. and Loo, I. (2015) *Review of the Declared Pests of Western Australia. Decision Paper*. Department of Agriculture and Food Western Australia, (23 pp. pdf).

Appendix 2: State Reference Group Members (Phase Two respondents)

Appendix 3: Public and Community Consultation (Phase Three Respondents)

Appendix 4: Stakeholder List: Contacted re involvement in the Review/State Reference Group

## References

Biosecurity Council of Western Australia, BCWA (2015) The Declaration of weeds and vertebrates under Section 22 of the Biosecurity and Agriculture Management Act 2007. Appendix C to the Biosecurity Council of Western Australia: Annual Report 2014/2015. Department of Agriculture and Food Western Australia, South Perth. (5 pp.) Url: www.agric.wa.gov.au/sites/gateway/files/WABC%20Annual%20Report%2014-15.pdf

Cook, D.C. (2013) Agricultural Resource Risk Management, Impact Assessment Narrow Leaf Cotton Bush (*Gomphocarpus fruticosus*). Western Australian Agriculture Authority (17 pp.).

Dodd, J. and Loo, I. (2015) *Review of the Declared Pests of Western Australia. Decision Paper*. Department of Agriculture and Food Western Australia, (23 pp. pdf).

Loo, I. and Reeves, A. (2015) Priority Declared Species - Agricultural Impact. Biosecurity and Regulation, Invasive Species Position Statement. Department of Agriculture and Food Western Australia, South Perth. (27 pp.).

Reeves, A. (2014). Control plan for cotton bush (*Gomphocarpus fruticosus*) in Western Australia. Department of Agriculture and Food, Western Australia, Invasive Species. (34 pp.).

## Appendix 1: Review of the Declared Pests of Western Australia (decision paper)

REVIEW OF THE DECLARED PESTS OF WESTERN AUSTRALIA

**Position paper**

**Jonathan Dodd and I-Lyn Loo, Invasive Species program**

**4 September 2015**

# Purpose

This position paper outlines the process proposed for reviewing the declared plants (weeds) and animals (vertebrate pests) that are present in Western Australia. It incorporates comments and recommendations received during consultation in May 2015.

The aim of the review is to provide the State with an up-to-date, rational, realistic and widely-supported suite of declared pests that

* reflects the intent of the BAM Act and BAM Regulations,
* meets community, industry and landholder expectations, and
* is appropriate to regulatory bodies’ capacity for delivering compliance.

The review will determine whether this State’s declared plants and animals are declared appropriately.

# Background

The *Biosecurity and Agriculture Management Act 2007* (BAM Act) and the associated *Biosecurity and Agriculture Management Regulations 2013* (BAM Regulations) allow for organisms to be declared as pests in all or part of the State and categorised into different control and keeping categories. The BAM Act places legal obligations on the landholder to undertake specific measures in relation to a declared pest.

Pests may be declared if they have – or may have - an adverse effect on native organisms, the well-being of people, the natural environment, and/or the productivity of the state’s agricultural, forest, fishing or pearling industries.

Organisms may be declared as **Permitted organisms** (under section 11 of the BAM Act), **Prohibited organisms** (section 12) or **Declared** **Pests** (section 22(2)), or they can remain **unlisted** (section 14). Under section 22(1) of the BAM Act, all section 12 prohibited organisms are declared pests for the whole of Western Australia.

Declared pests may be categorised into the following control categories:

* Exclusion (C1)
* Eradication (C2) or
* Management (C3).[[1]](#footnote-1)

Details of the currently-declared pests are on the WA Organisms List (WAOL) which can be found [online](https://www.agric.wa.gov.au/bam/western-australian-organism-list-waol) (<https://www.agric.wa.gov.au/bam/western-australian-organism-list-waol>).

This review will focus on declared pests known to be present in the State. There are currently ~137 declared pest species present in WA, comprising 42 species of vertebrate pest species and 95 plant species (Table 1 and Attachment 1). This is discussed in more detail in the **Scope of the Review** section, below.

**Table 1:** analysis of declared plants and vertebrate pests (both declared pests and prohibited organisms) present in Western Australia (as in WAOL, 27 July 2015)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Total present in WA | Declared pest (section 22(2)) | Prohibited organism (section 12) |
| Animals (vertebrate pests) | 42 | 42 | 0 |
| Plants | 95 | 79 | 16 |
| TOTAL | 137 | 121 | 16 |

The term ‘present’ as used in the BAM Act and related documents refers to pests that are known to occur in the state, such as when naturalised or in cultivation. Organisms held in the state under suitable biosecurity controls are not considered to be ‘present’ in the state.

# Need for the Review

Current declarations (except the most recent ones)[[2]](#footnote-2) were transferred on a like-for-like basis from the *Agriculture and Related Resources Protection Act 1977* (ARRPA) declarations. The resulting BAM Act declared pest list largely reflects the previous ARRPA declarations; however, for some declared species the circumstances and perceived risks that led to their declaration have changed since they were first declared.

There is increasing importance in prioritising declared pest management activities so that government agencies and community-based pest management groups can direct their resources towards the most significant target species and to those species with the highest impacts. This review will help identify those target species.

## Significant invasive species

The review will have a particular focus on identifying those declared pests that are significant invasive species. The IS Plan (Anon 2015a) defines a significant invasive species as either:

* A high priority invasive species or
* A high profile species.

**A high priority invasive species** is one that has been defined by formal risk assessment and prioritisation processes as being a high risk to economic, environmental or social values, and where prevention and/or control is feasible.

**A high profile invasive species** is one that the community rates highly for its impacts on economic, environmental or social values, and where the community would like to see increased control activity.

# Declaration Reviews in Other Jurisdictions

The rationale for WA’s review of declared pests is consistent with the comprehensive reviews of declared plants carried out recently - or currently in progress - in other jurisdictions.

Systematic reviews of declared plant lists have been undertaken in Victoria (beginning in 2002), New South Wales (since 2009), Northern Territory (since 2010) and South Australia (since 2011).

# Strategic and Policy Context

The need for a declaration review in Western Australia has been identified in several recent documents, especially the following.

## An Invasive Species Plan for WA 2015-2019

The *Invasive Species Plan for WA* (the Invasive Species Plan) (Anon 2015a) was prepared by an inter-agency working group comprising staff from the departments of Agriculture and Food, Parks and Wildlife, and Fisheries, and the WA Local Government Association, with input from other relevant agencies and parties. The Invasive Species Plan is available online (<https://www.agric.wa.gov.au/invasive-species/invasive-species-plan-western-australia-2015-2019>).

The declaration review is directly relevant to two of the IS Plan’s objectives, in particular Objective 1 (*improved priority setting and transparency in declaration processes in invasive species management*) and Objective 4 (*efficiently applied regulation underpins effective control of invasive species*).

Strategy G1.1 supports Objective 1 and involves

* Assessing risks in determining priorities for action.
* Considering whole-of-state *versus* regional risk assessment of pest species.
* Recognition of the distinction between **high priority invasive species** whose status is determined by formal, science-based risk assessments) and **high profile invasive species** that the community considers to be contentious and the cause of major problems to that community (high profile invasives species are often, but not always, high priority species).
* Periodic reviews of high priority and high profile invasive species.

Strategy G1.2 is also related to Objective 1 and involves

* Improved declaration processes for invasive species under the BAM Act, and
* Rationalising the list of declared invasive species.

Strategies 4.1 and 4.2 support Objective 4 which covers regulation and compliance, including compliance for C3 declared pests.

## Western Australia State Biosecurity Strategy

The *Western Australia State Biosecurity Strategy* (the State Biosecurity Strategy) (Anon 2014) identifies five principles that are considered essential to underpin WA’s biosecurity system. The State Biosecurity Strategy is available [online](https://www.agric.wa.gov.au/biosecurity-quarantine/draft-state-biosecurity-strategy-comment) (<https://www.agric.wa.gov.au/biosecurity-quarantine/draft-state-biosecurity-strategy-comment>).

The declaration review contributes particularly to Principle 4 (*Capacity and capability to prevent and manage priority pests and diseases will be maintained*), which includes strategies that relate to legislation, regulation and compliance. Strategy 4.4.3 (*Conduct periodic reviews of biosecurity legislation*) is especially relevant to the declaration review.

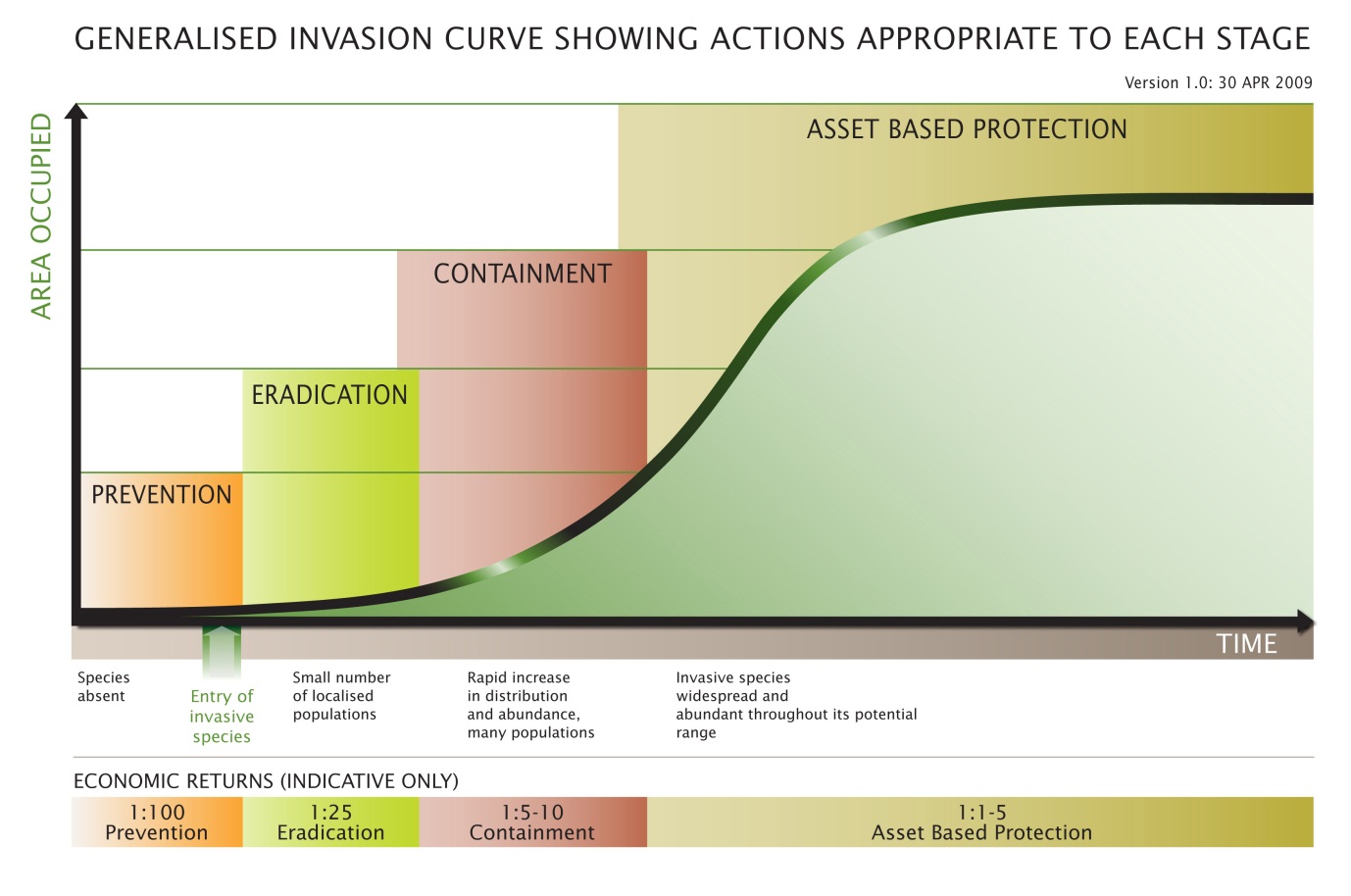
The Surveillance Plan for WA which is currently being prepared will specifically address most of the Outcomes and Strategies of the State Biosecurity Strategy’s Principle 3 (*Effective surveillance and diagnostics are in place*).

# The Generalised Invasion Curve

The Generalised Invasion Curve (Figure 1) has been adopted widely in Australia to illustrate the theoretical approach to managing invasive species, including declared pests. It depicts several aspects of invasive species management in relation to the distribution of a species and its invasion history.

In terms of the declaration review, the Generalised Invasion Curve illustrates the management objectives (Prevention, Eradication, Containment and Asset-based protection) that are relevant to the various stages of invasion by a species (Absence; Entry; Early spread; Increasing abundance and prevalence; and Widespread and abundant). The BAM Act declaration categories discussed earlier are closely related to the management objectives identified along the Invasion Curve, as follows:

* Prevention is provided by the C1 (Exclusion) category,
* Eradication by the C2 (Eradication) category, and
* Containment and Asset-based protection by the C3 (Management) category.



**Figure 1**: The Generalised Invasion Curve for invasive species (Source: Department of Environment and Primary Industries, Victoria).

The Generalised Invasion Curve also indicates the theoretical return on investment into each kind of pest management at each stage of the invasion process.

A particular pest species might be at different invasion stages in different parts of the State; because of this, different declaration categories will often be appropriate across the pest’s distribution. For example, Rainbow lorikeet (*Trichoglossus haematodus*) is a C3 (Management) pest in the Perth metropolitan area where it is well established and abundant. It is subjected to control in the metropolitan area to protect vineyard and orchard assets (see upper right-hand part of the invasion curve (Fig. 1)). Elsewhere in the State, Rainbow lorikeet is in the C1 (Exclusion) category to prevent its establishment beyond the metropolitan area and to validate eradication of new incursions (see lower left-hand portion of the curve).

Amongst declared weeds, Gorse (*Ulex europaeus*) is declared as a C3 (management) weed in Albany, Cranbrook and Denmark shires where it is present mostly in small scattered populations and is targeted for containment and population reduction; however, it is an eradication target (C2) in the rest of the state in order to prevent its establishment in other suitable areas.

The declaration review will reflect the concepts behind the Invasion Curve (Fig. 1), especially that of matching management action and, hence, declaration category to a pest’s invasion stage.

# Scope of the Review

Consistent with the *Invasive Species Plan for Western Australia 2015-2019* (Anon 2015a), the declaration review will address the declared plant and vertebrate animal species that are established in Western Australia.

Around 137 species of declared pests are present in the state. This total is made up of ~42 vertebrate pest species and 95 plant species (Table 1 and Attachment 1). Half the declared vertebrate pests to be reviewed and all the declared plant species are exotic, i.e. they are not native to WA (Attachment 1).

The majority of the pests to be covered by the review are declared under section 22 (2) of the BAM Act. The relevance of other legislation such as the *Wildlife* *Conservation Act 1950* on the status of declared native vertebrate species (Attachment 1) will be considered during the review.

Sixteen plant species that are present in the state are declared as section 12 prohibited organisms and are undergoing eradication (Table 1). The review will investigate whether their current declaration is appropriate.

The review will also consider the group of 18 plant species that were declared recently under the BAM Act. The group is made up of 15 species of Opuntioid cacti (*Austrocylindroputia* spp., *Cylindropuntia* spp. and *Opuntia* spp.), Silverleaf nightshade (*Solanum elaeagnifolium*), Cleavers (*Galium aparine*) and False cleavers (*G. spurium*).

## In Scope

This review will apply only to:

* plant and vertebrate pest species that
  + are known to be present in the State
  + live on land or in freshwater bodies
  + are currently declared under the BAM Act as section 22(2) declared pests, or
  + are declared as section 12 prohibited organisms that are present in the State.

## Out of Scope

The following groups of organisms are Out of Scope for this review:

* Significant plant and vertebrate pest species that are not declared in WA.
* Widespread terrestrial and freshwater weeds and vertebrate pests that are not causing significant economic, environmental and social impacts, and are not declared.
* Plant and vertebrate pest species not known to be present in WA, and which are already identified as prohibited organisms for WA under section 12 of the BAM Act.
* Marine invasive species.
* Invertebrate pests.
* Diseases of humans, plants, wildlife and livestock.
* Fungi and other microorganisms.
* Genetically modified organisms.

# Proposals for new declarations

During the review, if DPIRD receives any nominations for pest declaration it will process these as part of its routine business, provided each proposal is accompanied by a fully justified and comprehensively documented case. Assessment for declaration will also be required when a person seeks to import an unlisted species into the State.

The review will focus entirely on significant pest species (weeds and vertebrate pests) of the State’s lands and freshwater ecosystems that are currentlydeclared in WA. It will not be the mechanism for considering significant pests that are not currently declared.

# Community-based groups

The term ‘community-based groups’ is used throughout this document. This term does not refer to ‘the general public’. Instead, it refers to groups or bodies with interests in the management of the declared pests that are important to the community or to the industry from which the group is drawn.

The main examples of community-based groups are

* Biosecurity groups
* Recognised Biosecurity Groups and
* Groups linked to Industry Funding Schemes (IFSs).

**Biosecurity groups** are groups of landholders and other community members who seek to control invasive species within the group’s defined area. A biosecurity group’s defined area could be

* an area within which an existing group, such as a Declared Species Group, is controlling declared pest animals or weeds
* a local government area or a shire, or
* the area already identified by a community-based group that has a common interest for pest animal and weed control.

**Recognised Biosecurity Groups** (RBGs) are biosecurity groups that are formally recognised under the BAM Act and Regulations. RBGs normally cover a larger area than a biosecurity group, and may include one or several smaller biosecurity groups. An RBG has access to funding for declared pest control by requesting that the Minister for Agriculture and Food raise a rate on land within its area of operation. These funds are then matched by the State Government for agreed declared species programs.

The three industry-related groups that are linked to the **Industry Funding Schemes** (IFSs) that operate under the BAM Act are 1) the Cattle industry, 2) the Sheep and Goats industries and 3) the Grains, Seeds and Hay industries. These groups are actively involved in the management of declared pests that are of concern to the various industries represented by the schemes. These groups are viewed as industry-based community bodies with a comparable role to biosecurity groups for the current and future management of certain declared pests.

For the purposes of the Declaration Review, **Regional NRM groups** are not viewed as community-based groups equivalent to the groups listed above, although they already contribute to the management of significant pests, whether declared or not. NRM groups are not specific enough to be considered as biosecurity groups, and they do not have the capacity to enforce regulatory compliance for pest management or raise funds within their area.

**Proposed Approach**The review of the State’s existing suite of declared plants and animals will use existing criteria and assessment processes to answer the following questions for each declared pest:

* + Is the pest declared in the appropriate category?
    - *Which pest declarations should be retained?*
    - *Which pest declarations should be changed?*
  + Is the pest’s keeping category correct?
  + Is the pest declared for appropriate geographical areas?
    - *Should the declaration area be retained?*
    - *Should the declaration area be changed?*
  + Should the species continue to be classed as a declared pest?
    - *Which species should be retained?*
    - *Which should be removed from declaration?*

To allow the review to be conducted in a time-efficient manner using principles consistent with the BAM Act and Regulations, the review will be based on DPIRD’s BAM Act Policy 1.0: *Declaring the Status of Organisms* (Anon 2015b)[[3]](#footnote-3). This policy describes the process by which declared pests and prohibited organisms are assigned to control and keeping categories. The review will consider both the declaration category and keeping requirements of all species reviewed, based on existing criteria and principles for keeping.

The policy is particularly suitable for the declaration review because it applies to all classes of organisms, and it can be used when organisms require assessment or re-assessment (i.e. review) in relation to the BAM Act.

The policy discusses the declaration status to which an organism can be allocated (Permitted, Prohibited or Unlisted organism, or Declared pest) and describes the evaluation criteria (and associated considerations) used when determining the status.

The broad criteria used to establish an organism’s declaration status are:

* whether the organism is identifiable
* its presence in WA
* its potential for adverse effects
* its potential for establishment or increase in numbers, and
* whether it is subject to current or planned regulatory activities.

The policy also summarises the control and keeping categories available under BAM Regulations. Of particular relevance to the review are the evaluation criteria to be used when assigning an organism to a control category (i.e. C1, C2 or C3).

## Using the policy to review existing section 22(2) declared pests

**Attachment 2** illustrates the process to apply the BAM 1.0 policy (Anon 2015b) to the review of the existing suite of section 22(2) declared pests.

Phase 1

Phase 1 determines whether an organism meets the criteria for identification. Each organism that is currently declared as a section 22(2) declared pest will be assessed against the five criteria detailed in Table 2 to determine if its section 22(2) declaration status is appropriate. The five criteria (Table 2) are modified from the BAM 1.0 policy (Anon 2015b) and the considerations shown are relevant only to the section 22(2) declared pests that are within the scope of the declaration review.

The criteria in Tables 2 and 3[[4]](#footnote-4) will also be applied to the small number of section 12 prohibited plants species that are present in the State.

**Table 2**: criteria and considerations for determining the appropriate declaration status of current section 22(2) declared pests (Source: BAM 1.0 policy, Anon 2015b).

|  | **Criteria** | **Considerations** |
| --- | --- | --- |
| 1 | Identifiable | The organism must be a distinct taxonomic entity, identified by a valid, accepted name.  The taxonomic unit for the organism is generally a species and the assigned name should include genus, species, scientific authority (including year where possible) and common name (where possible).  Higher or lower taxonomic levels can be used if this is supported by a scientifically-sound rationale.  Relevant changes in taxonomy, nomenclature and synonyms to be documented. |
| 2 | Presence in Western Australia | If the organism is present (or not present) in the State, and its presence causes (or is likely to cause) adverse effects to the State or an area, then it may be considered as either a prohibited organism (s.12) or a declared pest (s.22).  If the organism is present (or not present) in the State and is not likely to cause adverse effects then it may be considered as a permitted organism (s.11).  Presence in the State is evidenced by published records, checklists, catalogues, pest and disease databases, and by consulting relevant specialists.  Justifications to be supported by appropriate references or other relevant information.  Absence signifies that the organism is not known to occur, or there are no suitable records of its presence in the State.  *Any organism native to the State will be assessed as permitted.* Records must be available to substantiate that the organism was considered to be native to Western Australia at the time of colonial settlement, otherwise a full assessment will be required of the organism’s potential for establishment or spread, and its potential for adverse impacts. Where an organism is native *to an area* within the State, the organism should not be declared for that area. Note that organisms native to **Australia** and those listed under the *Wildlife Conservation Act 1950* can be declared pests for WA. |
| 3 | Potential for adverse effects | There must be clear indication that the organism has (or may have) an adverse effect should it be introduced. It may have an adverse effect if it establishes in **increased numbers** or to a **greater extent**. An organism can have an adverse effect on:   * human beings; or * another organism; or * the environment, or part of the environment; or * agricultural activities, fishing or pearling activities, or related commercial activities carried on, or intended to be carried on, in the State or part of the State;   An organism may have adverse effects if it is released into the natural environment, even if it has no potential to establish or spread. This organism may be assessed as a prohibited organism.  A *high impact organism* can be prescribed, leading to higher penalties for associated offences than for other declared pests.  If an organism is not likely to have any adverse effects (for the State or an area), then it does not satisfy the necessary criteria for being a prohibited organism or a declared pest and should therefore be assessed as permitted. |
| 4 | Potential for establishment or spread OR increase in numbers | Evidence to support the conclusion that the organism could establish in Western Australia, e.g. the presence of climatic and other environmental conditions that are favourable to the establishment and spread of the organism. Evidence may include information regarding feral populations of the species overseas, large overseas range size, it being a member of a taxon the members of which are documented as causing damage, and/or significant climate or environmental match with Australia.  If an organism has no potential for establishment or spread in Western Australia (and not just at the point of entry), it would not immediately be assessed as a prohibited organism or declared pest. However, some organisms, especially vertebrate animals, have the potential to cause localised unacceptable adverse consequences without the need to establish and/or spread. These transient organisms that may have significant pest potential or cause unacceptable adverse impacts without establishing or spreading can be dealt with by considering criteria four and five concurrently. |
| 5 | Subject to current or planned regulatory activities | If an organism is under an effective or official **eradication program** OR its eradication is feasible, the organism may be assessed as prohibited.  For some organisms under (or proposed to be under) **widespread and coordinated control** it would be more appropriate to assess the organism as a declared pest under section 22. This can minimise mandatory reporting requirements and other legislative requirements needed for prohibited organisms (quarantine pests) under the SPS agreement. |

Phase 2

Phase 1 determines the declaration status of each organism. This may mean that the declaration status of the organism could remain as a section 22(2) declared pest or its status might require an amendment either to that of a section 11 permitted organism or a section 12 prohibited organism.

Phase 2 determines the appropriate control category for section 22(2) declared pests identified during Phase 1. It will also determine future actions applicable to organisms identified in Phase 1 as meeting the criteria for section 11 permitted organisms or section 12 prohibited organisms. The process to be followed in Phase 2 is shown in Attachment 2.

***Organisms that meet the criteria for a section 22(2) declared pest***

For organisms that meet the criteria for a section 22(2) declared pest (Attachment 2), the criteria in Table 3 will be used to determine the appropriate control category (i.e. whether C1, C2 or C3). The criteria and comments in Table 3 provide more detail than that contained within the BAM 1.0 policy, but they are consistent with the policy.

**Table 3**: evaluation criteria for assigning control categories to section 22(2) declared pests (Source: BAM 1.0 policy, Anon 2015b).

|  |  |  |
| --- | --- | --- |
| **Category** | **Criteria** | **Comments** |
| Exclusion (C1) | 1. Not known to be present in WA. Consideration should be given to prohibited status (s. 12), and 2. Is assessed as being cost-effective to exclude because it either:  * Has a significant adverse impact in the area; or * Is able to establish or spread, or increase in numbers in the area and potentially have an adverse effect. | Individuals of C1 pests that turn up intermittently within the State but do not establish a population, *may* be eradicated without the need to assign them to C2 if the response by land managers is sufficient to prevent establishment. |
| Eradication (C2) | 1. Detected, or likely or suspected to be present, 2. Limited to a small number of localised populations; and 3. Assessed as technically feasible to eradicate; 4. Assessed as economically feasible to eradicate because, relative to the cost of eradication, it:    * has a significant adverse effect in an area or the State; and/or  * is able to establish or spread in the area and then potentially have an adverse effect; and/or * will have an adverse effect if present in greater numbers or to a greater extent. | Organisms in a C2 area have established or are likely to establish a population, unlike organisms (individuals) that turn up intermittently in a C1 area and have not established a population. |
| Management (C3) | 1. Present in the area 2. Assessed as:  * having a significant adverse effect in the area; * able to establish or spread in the area and then potentially have an adverse effect; * will have an adverse effect if in greater numbers or to a greater extent; * not considered technically feasible or cost-effective for eradication; * in need of co-ordinated, area-wide management to alleviate harmful effects; and * when detected, localised eradication may be undertaken, but not as part of a co-ordinated campaign. | An organism will be categorised in the C3 control category if it is assessed as having major or significant impact on agriculture.  Note that the C3 category is not valid for prohibited organisms. |

***Assigning potential section 22(2) declared pests to control categories***

The categorisation of section 22(2) declared pests that meet the criteria for the C3 (management) control category (see Table 2) will depend on the three factors shown in Attachment 2, namely:

1. the nature of their impacts;
2. whether there is – or is likely to be - a Memorandum of Understand (MOU) or a similar type of agreement with another government agency for the regulation and management of pests with nil or low agricultural impacts (i.e. non-agricultural pests); and
3. whether a community-based group (such as a biosecurity group or one formed under an Industry Funding Scheme) identifies a non-agricultural pest that is not subject to an MOU or similar as a priority pest for that group.

***Nature of pest impacts***

Declared pests differ in their impacts. Most cause impacts on agricultural production, others on the natural environment, while some others principally affect human amenity and well-being. Most pests impact on all three areas, but in varying amounts. For the purpose of this review a distinction will be made between agricultural and non-agricultural pests.

**An agricultural pest** is a declared pest with moderate to major impacts on agricultural production (covering all forms of agricultural activities comprising those of the grains, livestock and horticultural industries).

**A non-agricultural pest** is one whose impacts are wholly or largely on the natural environment or social values, and which has nil to low agricultural impacts.

Organisms that meet the criteria both for declaration as section 22 (2) pests and for placing in the C3 category will be recommended to be placed in that category if they are determined as having moderate to major impacts on agriculture (Attachment 2).

Potential C3 pests with nil to low agricultural impacts are considered to be non-agricultural pests. Their categorisation and further management will depend on the existence of an Memorandum of Understanding (MOU) or similar, and the potential involvement of community-based groups, as discussed below.

***Memorandum of Understand (MOU) or similar with another government agency***

The category recommended for potential C3 declared pests that have nil to low impacts on agriculture (non-agricultural pests) will depend on whether a Memorandum of Understanding (MOU) or a similar form of agreement exists (or is expected to be developed) between DPIRD and another government agency. The MOU or similar would allow that agency to undertake regulation and management of the pest (Attachment 2).

Where an MOU or similar exists or is expected to be developed for the regulation and management of a non-agricultural pest that otherwise meets the criteria for the C3 control category, the pest will be assigned to the C3 category.

***Involvement of community-based groups***

For a pest that meets the criteria for declaration in the C3 category, but which

* has low or no agricultural impacts, and
* has no MOU or similar in place or anticipated with another government agency for its regulation/management,

the recommended declaration category will depend on whether the pest is identified as a priority by a community-based group, such as a recognised (or other) biosecurity group or a group established under an Industry Funding Scheme (Attachment 2).

If the pest is identified as a priority by such a group, it will be recommended to be declared as a section 22(2) declared pest, but will not be allocated to a control category (“section 22(2): no control category”).

If the pest is not the subject of an MOU or similar, and has no recorded or emerging priority status for a community-based group, it will be declared as a section 22 declared pest, but will not be allocated to a control category (“section 22(2): no control category”). Its declaration status will be reviewed after two years. The future status of such a pest is described below.

***Future status of pests not subject to an MOU or community-based involvement***

Pests that are not covered by an MOU or similar and which are not identified as priorities by community-based groups will have their declaration category reassessed after two years.

During the 2-year period, if an MOU or similar has been set up for the pest or if it has been identified as a priority for a community-based group, it will remain in the “section 22(2): no control category” and its status will be reviewed after a further two years.

If, after the 2-year period, no MOU or similar has been set up for the pest and it has not been identified as a priority for a community-based group, it will be recommended to have its declaration status amended to that of a permitted organism under section 11 of the BAM Act.

***Organisms that have been assessed as permitted organisms under section 11***

Pests currently declared under section 22(2) of the BAM Act will be assessed against the criteria detailed in Table 2. Currently-declared pests assessed as meeting the criteria for permitted organisms under section 11 of the BAM Act will be recommended to retain their section 22(2) declaration status, provided they are considered to be priority pests by a community-based group (i.e. a biosecurity group, Recognised Biosecurity Group or IFS body); however, they will not be assigned to a control category. The resulting declaration will be “section 22(2): no control category” (Attachment 2).

The retention of the declared pest status provides the opportunity for a Recognised Biosecurity Group or an IFS body to access funds available from relevant accounts for the management of that pest.

The declared pest status of a pest declared in the “section 22(2): no control category” will be reviewed after two years. If, after two years, the declared pest is no longer viewed as a priority by a community-based group, its declaration status will be amended to a permitted organism under section 11 of the BAM Act (Attachment 2).

The declaration status of a current section 22(2) declared pest that has been assessed as meeting the criteria as a section 11 permitted organism, and which is not considered a priority pest by a community-based group, will be amended to a permitted organism (Attachment 2).

***Organisms that have been assessed as prohibited organisms under section 12***

The declaration status of a current section 22(2) declared pest that has been assessed as meeting the criteria of a section 12 prohibited organism will be amended to that of a section 12 prohibited organism (Attachment 2).

**Timeframe**

**Timetable for the Declaration Review**

The review will be conducted in a staged process. This will involve assessing the declared pests in groups of 20-25 and then conducting consultation on the recommended declaration changes at 2-monthly intervals throughout the review, as outlined below:

July 2015: Decide the revisions required to the review process, based on feedback received from consultation in May-June 2015. Finalise the governance arrangements.

August 2015 – June 2016: over this period the ~137 declared pests (comprising ~42 vertebrate pest species and 95 plant species) will be reviewed in a staged process. This will involve the following steps:

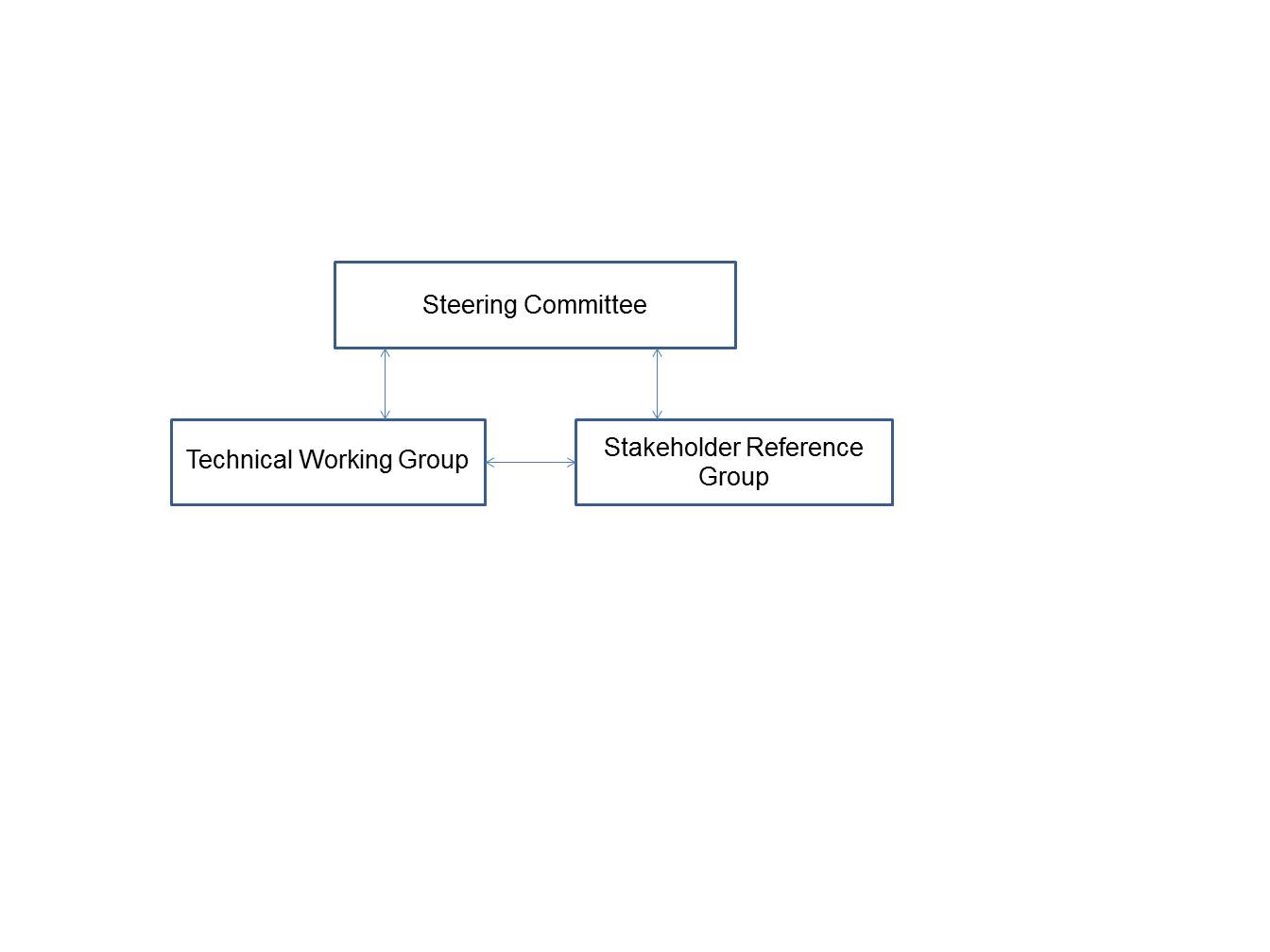
* Re-assessing the declared pests in batches of 20-25, taking around 2 months to assess all species in each group.
* Conducting consultation on recommended changes for each group at the end of each period. This will involve seeking comment on the proposed changes from the Stakeholder Reference Group (SRG - see below for details).
* Assessment and consideration of feedback from SRG on each batch of recommendations, before finalising recommended declaration changes.
* After all batches have reviewed by the SRG, undertake broad consultation including the 60 stakeholder organisations contacted during the initial round of consultation in May-June 2015.
* Complete considering input from broad consultation and determine final recommended declaration changes by 30 June 2016.

The formal process for changing declarations will be handled outside the review.

# Proposed Governance Structure

Because of the large number of pest species under review and the wide range of stakeholders, it is proposed to establish the following three groups with different roles in the review (Figure 2):

* **Steering Committee**This committee will oversee the delivery and project management of the review. It will also be the decision-maker for key issues relating to the review.
* **Technical Working Group**   
  The Technical Working Group will provide technical advice on the review process and on the target species. It will also undertake the actual assessment of individual pests. The group will comprise DPIRD specialists with experience in assessing the impacts of vertebrate pests and weeds.
* **Stakeholder Reference Group**   
  The Stakeholder Reference Group (SRG) will be the key stakeholder group for the review. It will provide guidance and feedback on the review process, and on the changes proposed as a result of re-assessing declaration categories. The SRG will be made up of representatives from all the stakeholder groups that expressed interest in joining the SRG during the May-June 2015 consultation on the Declaration Review discussion paper.



**Figure 2:** Proposed governance arrangements

# References

Anon (2014) *DRAFT Western Australian State Biosecurity Strategy.* Biosecurity Council of Western Australia. Nov. 2014.

Anon (2015a) *An Invasive Species Plan for Western Australia 2015-2019*.

Anon (2015b) *Biosecurity and Regulation Directorate Policy #1: BAM 1.0. BAM Act Policy: Declaring the Status of Organisms.* Version number: V6\_20150223.

HB 294:2006 (2006) *National Post-Border Weed Risk Management Protocol* (Standards Australia 2006, HB 294:2006).

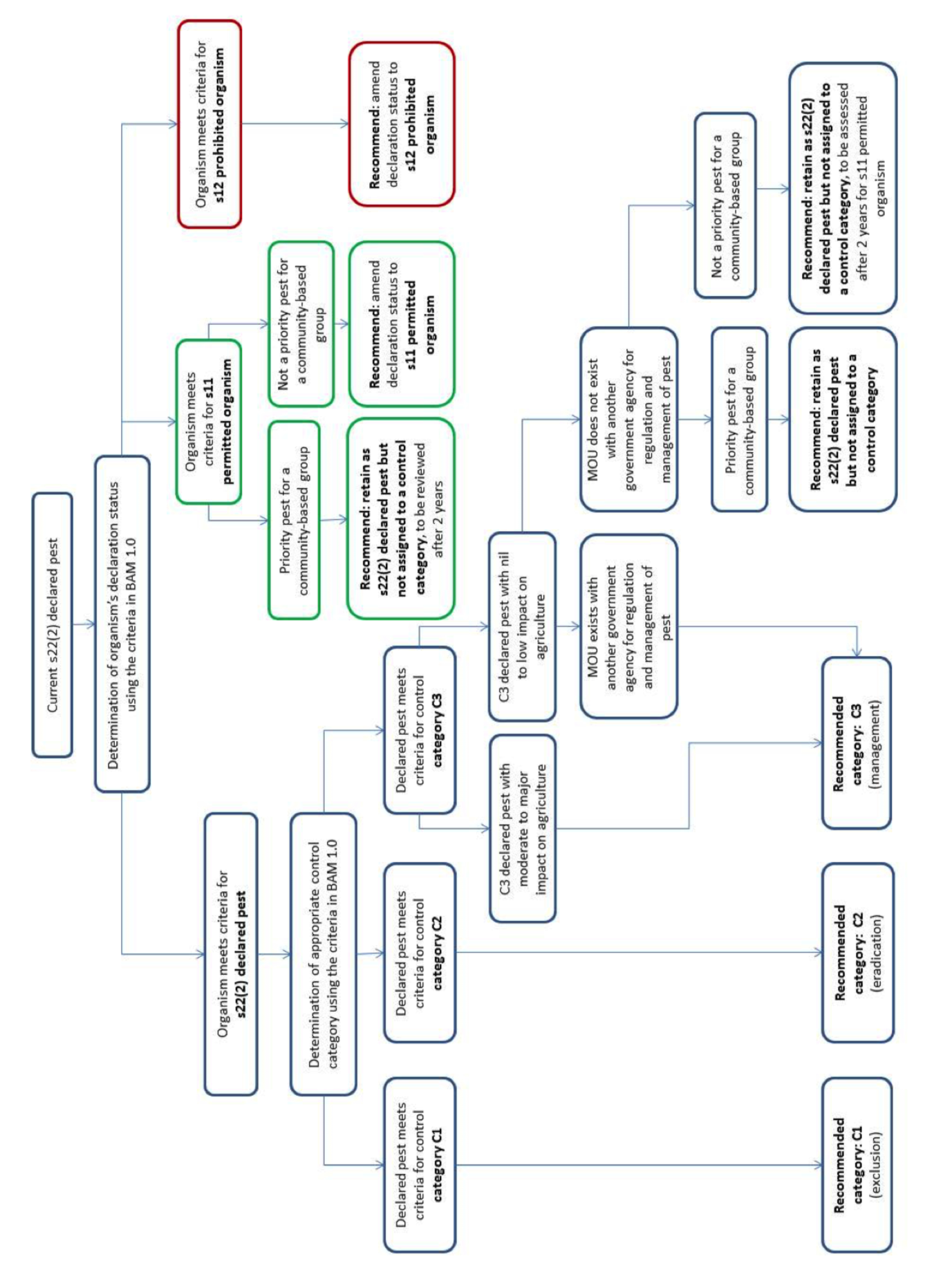
Johnson SB and Power M (2014) I’m from the government and I need your help! Addressing the weed challenge through engagement of Local Government and other stakeholders during the New South Wales weed declaration review. In: *Proceedings of the 19th Australasian Weeds Conference – Science, Community and Food Security: the Weed Challenge.* (Tasmanian Weed Society, Hobart) pages 34-37.

Setterfield S, Ferdinands K, Rossiter-Rachor N and Douglas M (2010) The Northern Territory’s Weed Risk Management system: an application of the national post-border WRM protocol. *Plant Protection Quarterly* 25(2), pages 86-89.

**ATTACHMENT 1:** declared pest species present in the state. (**N**) after common name indicates that the species is native to WA

|  |  |  |
| --- | --- | --- |
| **ANIMALS** |  |  |
| **Common Name(s)** | **Scientific name** | **Current category** |
| Agile Wallaby (**N**) | *Macropus agilis* | C3 |
| Australian Raven (**N**) | *Corvus coronoides* | C3 |
| Cane toad | *Rhinella marina* (was *Bufo marinus*) | C1 |
| Common House Gecko, Bridled House Gecko | *Hemidactylus frenatus* | C1, C3 |
| Dingo (**N**) | *Canis lupus dingo* | C3 |
| Dingo-dog hybrids (**N**) | *Canis lupus dingo* x *Canis lupus familiaris* | C3 |
| Domestic rabbit or commercial breeds | *Oryctolagus cuniculus (domestic)* | C3 |
| Emu (**N**) | *Dromaius novaehollandiae* | C3 |
| Euro, Biggada (**N**) | *Macropus robustus erubescens* | C3 |
| European Starling, Common Starling | *Sturnus vulgaris* | C1, C2 |
| Fallow deer | *Dama dama* | C3 |
| Feral camel | *Camelus dromedarius* (feral) | C3 |
| Feral Dog | *Canis lupus familiaris* (feral) | C3 |
| Feral donkey | *Equus asinus* (feral) | C3 |
| Feral goat | *Capra hircus* (feral) | C3 |
| Feral horse | *Equus caballus* (feral) | C3 |
| Ferret | *Mustela putorius furo* | C3 |
| Flowerpot Snake, Brahminy blindsnake, Bootlace Snake | *Ramphotyphlops braminus* | C1, C3 |
| Galah (**N**) | *Cacatua roseicapilla* | C3 |
| Little corella (Kimberley subspecies) (**N**) | *Cacatua sanguinea sanguinea* | C1, C3 |
| Little corella (Pilbara-Murchison and northern wheatbelt subsp.) (**N**) | *Cacatua sanguinea westralensis* | C1, C3 |
| Long-billed black cockatoo, Baudin’s Cockatoo (**N**) | *Calyptorhynchus baudinii* | C3 |
| Long-haired Rat (**N**) | *Rattus villosissimus* | C3 |
| Maned Goose, Australian Wood Duck (**N**) | *Chenonetta jubata* | C3 |
| Mountain Duck, Australian Shelduck (**N**) | *Tadorna tadornoides* | C3 |
| Northern Palm Squirrel | *Funambulus pennantii* | C1, C3 |
| Ostrich | *Struthio camelus* | C3 |
| Rainbow Lorikeet (**N**) | *Trichoglossus haematodus* | C1, C3 |
| Red Fox | *Vulpes vulpes* | C3 |
| Red Kangaroo, Marlu (**N**) | *Macropus rufus* | C3 |
| Ring-necked pheasant, Common pheasant | *Phasianus colchicus* | C1, C3 |
| Silvereye (**N**) | *Zosterops lateralis* | C3 |
| Sulphur-crested Cockatoo | *Cacatua galerita* | C1 |
| Twenty-eight parrot, Australian ringneck (**N**) | *Barnardius zonarius* | C3 |
| WA King Parrot, Red-capped Parrot (**N**) | *Purpureicephalus spurius* | C3 |
| Wapiti, Red deer, Elk | *Cervus elaphus* | C3 |
| Water buffalo | *Bubalus bubalis* | C1, C3 |
| Western corella (Lake Muir subsp.), Muir's Corella (**N**) | *Cacatua pastinator pastinator* | C3 |
| Western corella (northern and central wheatbelt subspecies) (**N**) | *Cacatua pastinator butleri* | C3 |
| Western Grey Kangaroo (**N**) | *Macropus fuliginosus* | C3 |
| Wild boar, Feral pig | *Sus scrofa (feral)* | C3 |
| Wild rabbit only with wild-type brown colouring | *Oryctolagus cuniculus* (feral) | C3 |
| **PLANTS** |  |  |
| **Common Name(s)** | **Scientific name** | **Current category** |
| Gamba grass | *Andropogon gayanus* | Pro: C2 |
| Mexican poppy | *Argemone ochroleuca* | C3 |
| Bridal creeper | *Asparagus asparagoides* | C3 |
| Opuntioid cactus | *Austrocylindropuntia cylindrica* | C3 |
| Opuntioid cactus | *Austrocylindropuntia subulata* | C3 |
| African thistle | *Berkheya rigida* | C3 |
| Calotropis | *Calotropis procera* | C3 |
| Saffron thistle | *Carthamus lanatus* | C3 |
| Glaucous star thistle | *Carthamus leucocaulos* | C3 |
| Skeleton weed | *Chondrilla juncea* | C2, C3 |
| Boneseed | *Chrysanthemoides monilifera* subsp*. monilifera* | Pro: C2 |
| Field bindweed | *Convolvulus arvensis* | C3 |
| Rubber vine | *Cryptostegia grandiflora* | Pro: C2 |
| Rubber vine | *Cryptostegia madagascariensis* | C3 |
| Golden dodder | *Cuscuta campestris* | C2, C3 |
| Opuntioid cactus | *Cylindropuntia fulgida* | C3 |
| Opuntioid cactus | *Cylindropuntia imbricata* | C3 |
| Opuntioid cactus | *Cylindropuntia kleiniae* | C3 |
| Opuntioid cactus | *Cylindropuntia rosea* | C3 |
| Opuntioid cactus | *Cylindropuntia tunicata* | C3 |
| Artichoke thistle or cardoon | *Cynara cardunculus* | C3 |
| Thornapples: Fierce thornapple | *Datura ferox* | C3 |
| Thornapples: Downy thornapple | *Datura inoxia* | C3 |
| Thornapples: Leichhardt’s thornapple, Mexican thornapple | *Datura leichhardtii* | C3 |
| Thornapples: Hoary thornapple | *Datura metel* | C3 |
| Thornapples: Common thornapple | *Datura stramonium* | C3 |
| Thornapples: Hairy thornapple | *Datura wrightii* | C3 |
| Paterson’s curse | *Echium plantagineum* | C3 |
| Leafy elodea | *Egeria densa* | Pro: C2 |
| Water hyacinth | *Eichhornia crassipes* | Pro: C2 |
| Doublegee | *Emex australis* | C3 |
| Lesser jack | *Emex spinosa* | C3 |
| Horsetails - common horsetail | *Equisetum hyemale* | Pro: C2 |
| Cleavers | *Galium aparine* | S22(2) ncc |
| False cleavers | *Galium spurium* | S22(2) ncc |
| Three-horned bedstraw | *Galium tricornutum* | Pro: C2 |
| Cotton bush, narrow leaf | *Gomphocarpus fruticosus* | C3 |
| Heliotrope | *Heliotropium europaeum* | C3 |
| Hydrocotyl | *Hydrocotyle ranunculoides* | C3 |
| St. John's wort | *Hypericum perforatum* | C3 |
| Bellyache bush | *Jatropha gossypiifolia* | C3 |
| Lantana | *Lantana camara* | C3 |
| Hoary cress | *Lepidium draba* | Pro: C2 |
| Horehound | *Marrubium vulgare* | C3 |
| Mimosa | *Mimosa pigra* | Pro: C2 |
| Cape tulip: One-leaf cape tulip | *Moraea flaccida* | C3 |
| **Common Name(s)** | **Scientific name** | **Current category** |
| Cape tulip: Two-leaf cape tulip | *Moraea miniata* | C3 |
| Parrot's feather | *Myriophyllum aquaticum* | C2 |
| Stemless thistle | *Onopordum acaulon* | C3 |
| Prickly pear | *Opuntia elata* | C3 |
| Prickly pear | *Opuntia elatior* | C3 |
| Prickly pear | *Opuntia engelmannii* | C3 |
| Prickly pear | *Opuntia ficus-indica* | C3 |
| Prickly pear | *Opuntia microdasys* | C3 |
| Prickly pear | *Opuntia monacantha* | C3 |
| Prickly pear | *Opuntia polyacantha* | C3 |
| Prickly pear | *Opuntia puberula* | C3 |
| Prickly pear | *Opuntia robusta* | Pro: C1 |
| Prickly pear | *Opuntia stricta* | C3 |
| Prickly pear | *Opuntia tomentosa* | C3 |
| Parkinsonia | *Parkinsonia aculeata* | C1, C3 |
| Water lettuce | *Pistia stratiotes* | C2 |
| Praxelis | *Praxelis clematidea* | C1, C2 |
| Mesquite | *Prosopis glandulosa* | Pro: C2 |
| Mesquite | *Prosopis glandulosa* x *velutina* | C2, C3 |
| Mesquite | *Prosopis pallida* | Pro: C2 |
| Blackberry | *Rubus anglocandicans* | C1, C2, C3 |
| Blackberry | *Rubus laudatus* | C1, C2, C3 |
| Blackberry | *Rubus rugosus* | C1, C2, C3 |
| Blackberry | *Rubus ulmifolius* | C1, C2, C3 |
| Sagittaria | *Sagittaria platyphylla* | C3 |
| Willow: White willow | *Salix alba* | C3 |
| Willow: pussy | *Salix caprea* | C3 |
| Willow: Chilean willow | *Salix chilensis* | C3 |
| Willow: Common sallow | *Salix cinerea* | C3 |
| Willow: Corkscrew willow | *Salix matsudana* | C3 |
| Willow: Basket willow, common osier | *Salix viminalis* | C3 |
| Willow: Golden weeping willow | *Salix* x *chrysocoma* | C3 |
| Mintweed | *Salvia reflexa* | C3 |
| Salvinia | *Salvinia molesta* | Pro: C2 |
| Ragwort | *Senecio jacobaea* | Pro: C1, C2 |
| Candle bush | *Senna alata* | C3 |
| Sicklepod, javabean | *Senna obtusifolia* | C3 |
| Sida | *Sida acuta* | C3 |
| Sida | *Sida cordifolia* | C3 |
| Variegated thistle | *Silybum marianum* | C3 |
| Silverleaf nightshade | *Solanum elaeagnifolium* | C3 |
| Apple of Sodom | *Solanum linnaeanum* | C3 |
| Athel pine | *Tamarix aphylla* | C3 |
| Gorse | *Ulex europaeus* | C2, C3 |
| Prickly acacia | *Vachellia nilotica* | Pro: C2 |
| Bathurst burr | *Xanthium spinosum* | C2, C3 |
| Noogoora burr | *Xanthium strumarium* | C2, C3 |
| Arum lily | *Zantedeschia aethiopica* | C3 |
| Chinee apple | *Ziziphus mauritiana* | C3 |

**ATTACHMENT 2:** Flowchart illustrating the process for applying the criteria and considerations from the BAM 1.0 policy (Anon 2015b) to the review of current section 22(2) declared pests



## Appendix 2: State Reference Group Members- Phase Two respondents

|  |  |  |
| --- | --- | --- |
| Sector | Group | Representative |
| Government - State | DPIRD review leader | David Kessell |
| Government - State | Dept of Parks and Wildlife (DPaW) | Danielle Wiseman |
| Government - Local | WA Local Government Association (WALGA) | Mark Batty |
| Government - Local | Shire of Yilgarn | Wayne Della Bosca |
| Industry – Fund Committee | Cattle and Grains Industries Funding Committees (GSHIMC) | Brian Young |
| Industry – Peak body | Pastoralists & Graziers Association of WA (PGA) | Ian Randles |
| Industry – Peak body | WA Farmers | Kim Haywood |
| Industry – Biosecurity group | Blackwood Biosecurity Inc. | Sarah Ekin |
| Industry – Biosecurity group | Leschenault Biosecurity Group | Chris Howe |
| Industry – Biosecurity group | Meekatharra Rangelands Biosecurity Association (MRBA) | Geoff Brooks |
| Industry – Biosecurity group | Peel-Harvey Biosecurity Group | Jonelle Cleland |
| Industry – Biosecurity group | Pilbara RBG | Bill Currans |
| Industry – Biosecurity group | Southern Biosecurity Group | Karyn Tuckett |
| Industry – Producer group | Australian Macadamias (WA) | Chip Yelverton |
| Industry – Producer group | Pomewest | Mark Scott |
| Industry – Pest control | Animal Pest Management Service | Mike Butcher |
| Community – Peak body | Wheatbelt NRM | Rowan Hegglun |
| Community – Interest group | Committee for the Introduction and Keeping of Animals | Win Kirkpatrick |

## Appendix 3: Public and Community Consultation- Phase Three Respondents

|  |  |  |
| --- | --- | --- |
| Sector | Organisation | Representative |
| Biosecurity Group | Carnarvon RBA | Bill Currans |
| Biosecurity Group | Meekatharra Rangelands BA | Geoffrey Brooks |
| Community Group | Esperance Weeds Action Group | Robyn Cail |
| Industry Group | Facey Group | Sarah Hyde |
| Industry Group | Table Grapes WA | Allan Price |
| Industry Peak Body | WAFarmers | Kim Haywood |
| Local Government | City of Armadale | Paddy Strano |
| Local Government | City of Belmont | Nicole Davey |
| Local Government | City of Bunbury | Andrew Brien |
| Local Government | City of Bunbury | Colin Spencer |
| Local Government | City of Bunbury | Murray Cook |
| Local Government | City of Greater Geraldton | Michael DuFour |
| Local Government | City of Melville | Blair Bloomfield |
| Local Government | Shire of Augusta-Margaret River | John McKinney |
| Local Government | Shire of Chapman Valley | Maurice Battilana |
| Local Government | Shire of Esperance | Matthew Walker |
| Local Government | Shire of Kalamunda | Tamara Wilkes-Jones |
| Local Government | Shire of Koorda | Glen Buder |
| Local Government | Shire of Murray | Tom Lerner |
| Local Government | Shire of Northampton | Wendy Dallywater |
| Local Government | Shire of Waroona | Mychelle Jeffery |
| NRM Group | Cape to Cape Catchments Group | Genevieve Hanran-Smith |
| NRM Group | Chittering Landcare | Susan Pedrick |
| NRM Group | Leschenault Catchment Council | Chris Howe |
| NRM Group | Serpentine-Jarrahdale Landcare Group | Francis Smit |
| NRM Group | South Coast NRM | Karl Hansom |
| State Government | DPIRD | Kay Bailey |
| State Government | Main Roads Department | Sarah Belladonna |

## Appendix 4: Stakeholder List- Contacted re involvement in the Review/State Reference Group

|  |  |
| --- | --- |
| **Organisation** | **Representative** |
| Australian Association of Agricultural Consultants, Chair | Richard Vincent |
| Biosecurity Council of WA, Chair | Michelle Allen |
| Biosecurity Council of WA, Chair | Michelle Allen |
| Biosecurity Section Leader Department of Fisheries | Victoria Aitken |
| Biosecurity Senior Officers Group Department of Defence | Jarrad Scott |
| Biosecurity Senior Officers Group Department of Fisheries | Rae Burrows |
| Biosecurity Senior Officers Group Department of Biodiversity, Conservation and Attractions | Geoff Stoneman |
| Biosecurity Senior Officers Group Department of Premier and Cabinet | Rosh Ireland |
| Biosecurity Senior Officers Group Forest Products Commission | Andy Lyon |
| Birdlife WA, Chair | Mike Bamford |
| Blackwood Biosecurity Group Inc., Chair | Sheila Howat |
| Blackwood Biosecurity Group Inc., EO | Sarah Ekin |
| Carnamah LCDC, Chair | Paulina Wittwer |
| Carnarvon Rangelands Biosecurity Association Inc, Chair | Justin Steadman |
| Central Desert Native Title Services Wiluna Rangers, Manager | Rob Thomas |
| Central Wheatbelt RBG, EO | Bev Logue |
| Chittering Valley LCDC, Secretary | Rosanna Hindmarsh |
| Conservation planning | Rolf and Sue Meeking |
| Coolup LCDC, Secretary | Alan Neil |
| Coordinator Environmental Services Shire of Murray | Tom Lerner |
| Coordinator Ngurrawaana Rangers | Kingsley Woodley |
| Coordinator Tom Price Rangers | Shandell Raddock |
| Corrigin Farm Improvement Group, Chair | Murray Leach |
| Councilor/JP Bunbury Council | Murray Cook |
| Dandalup-Murray LCDC, Secretary | Kathy Elliott |
| Denmark Weed Action Group | Melissa Howe |
| Department of Biodiversity, Conservation and Attractions | Danielle Wiseman |
| Department of Biodiversity, Conservation and Attractions | Martin Rayner |
| Deputy Chair Pilbara RBG | Geoff Mills |
| Development Services Shire of Collie, EO | Keith Williams |
| Director PGA | Jenni Stawell |
| Dumbleyung LCDC | Claudia Hadlow |
| Eastern Wheatbelt RBG, EO | Lisa O'Neill |
| Env. Mgt & Policy, North & West Dept of Prime Minister & Cabinet, A/Adviser | Jane Dewing |
| Environment and Waste WALGA, EO | Mark Batty |
| Environment Branch Water Corporation | Operations Section |
| Environmental Consultants Association, President | Jamie Shaw |
| Environmental Protection Authority, Chair | Tom Hatten |
| Environmental Weeds Action Network, Secretary | Gillian Stack |
| Facey Group, Chair | Graeme Manton |
| Farmer - PGA Yandegin | Robert Bayly |
| Feral Animal Control Officer Australian Wildlife Conservancy | Gary Wilkinson |
| Gascoyne Catchments Group, Chair, Chair | Shaun D'Arcy |
| Geraldton Meat Exports | Paula Tang |
| Goldfields Nullarbor RBG , EO | Ross Wood |
| Goldfields Voluntary Regional Organisation of Councils, EO | Helen Westcott |
| Goldfields-Nullarbor Rangelands Biosecurity Association Inc, Chair | Trevor Hodshon |
| Gondwana Link, CEO | Keith Bradbury |
| Invasive Animals CRC, CEO | Andreas Glanznig |
| IPA Coordinator Dambimangari Rangers | Jarrad Holmes |
| IPA Coordinator Wilinggin | Kat Mitchell |
| Kimberley Rangelands Biosecurity Association Inc, EO | Dick Pasfield |
| Lake Grace LCDC, Secretary | Suzanne Reeves |
| Land and Sea Management Goldfields Land and Sea Council | Darren Forster |
| Land and Sea Unit Yawuru Organisation, Manager | Dean Matthews |
| Landcare Officer Katanning LCDC | Andrea Salmond |
| Landscape ecologist | Nathan McQuoid |
| Leschenault Biosecurity Group | Mike Bell |
| Leschenault Biosecurity Group | Oren White |
| Leschenault Catchment Council, Committee Member | Kevin Martin |
| Liebe Group, Chair | Gary Butcher |
| Lower South West Biosecurity Group | Kathy Dawson |
| Mattiske Consulting, Managing Director | Libby Mattiske |
| Meekatharra RBG, Chair | Ashley Dowden |
| Merredin LCDC, Chair | David Morley |
| Merredin LCDC, President | Paul Madaffari |
| Merredin LCDC, Secretary | Carol Whitehead |
| Mingenew-Irwin Group, Chair | Craig Forsyth |
| Mt Marshall LCDC, Chair | Ben Beckingham |
| Mt Marshall LCDC, Secretary | Chris Kirby |
| Murchison regional vermin council, Chair | Jason Homewood |
| National Wild Dog Facilitator Facilitator | Greg Mifsud |
| Ngaanyatjatjarra Rangers, Manager | Alex Knight |
| Ngadju Rangers, Manager | Peter Price |
| North East Farming Futures, Chair | Garry Collins |
| North Kimberley LCDC, Chair | Joanna Atkins |
| North Kimberley LCDC, Secretary | Sarah Legge |
| North Swan LCDC, Chair | Judith Beer |
| North Swan LCDC, Secretary | Anne James |
| Northern Agricultural Catchment Council, CEO | Richard McLellan |
| Northern Mallee DSG, Chair | Scott Pickering |
| Northern Mallee DSG, EO | Jodie Adam |
| Northern Mallee DSG, EO | Linda McCrae |
| NRM WA NRM Groups, EO | Kathleen Broderick |
| Nursery and Garden Industry of WA | Esther Ngang |
| Nursery and Garden Industry of WA, President | Colin Groom |
| Operations Manager Martu KJ Rangers | Tristan Cole |
| Operator - dog fencer Kendenup Fencing | Kim and Val Saggers |
| Ord Land and Water, Chair | Christian Boecker |
| Pastoral Lands Board Department of Lands, EO | Caroline Horsfield |
| Pastoral Lands Board, Chair | Leanne Corker |
| Pastoral Lands Department of Lands, Manager | Karel Eringa |
| Pastoralist - PGA Kalyeeda Station | Peter Camp |
| Pastoralist - PGA Mandora Station | Joe de Pledge |
| Peel-Harvey Biosecurity Group | Barrie Thompson |
| Peel-Harvey Biosecurity Group | Marion Lofthouse |
| Peel-Harvey Biosecurity Group, EO | Jonelle Cleland |
| Perth Region NRM, CEO | Lisa Potter |
| Pests Program Coordinator Department of Biodiversity, Conservation and Attractions | Dennis Rafferty |
| PGA Livestock Committeee, Chair | Digby Stretch |
| PGA of Western Australia WAWDAG/Landholder | Ellen Rowe |
| Piawaning/Yerecoin LCDC | Caroline Duggan |
| Pila Nguru AC Spinifex Rangers, Manager | Ian Baird |
| Pilbara Community Projects Coordinator Greening Australia | Pip Short |
| Pilbara Regional Biosecurity Group Inc, EO | Bill Currans |
| Policy Officer, Grains, Livestock and Climate Change Pastoralists and Graziers Association of Western Australia | Ian Randles |
| Policy WA Farmers Federation, EO | Kim Haywood |
| Principal Environment Officer Policy, Main Roads WA | Martine Scheltema |
| Priority Animals Response project DPIRD Invasive Species project team | Richard Watkins |
| Private | Mike Lohr |
| Private | Vicki Long |
| Program Manager (Deserts & Pilbara) Rangelands NRM | Chris Curnow |
| Program manager Biodiversity Wheatbelt Natural Resource Management Inc | Rowan Hegglun |
| Program Manager MLSU Murujuga Land and Sea Unit | Sean McNeair |
| Program Manager Pilbara Corridors Project | Ian Cotton |
| Program Manager West Kimberley Rubber Vine Eradication Program | John Szmanski |
| Project Coordinator Pilbara Corridors Project | Ostiane Massiani |
| Project Manager Pilbara Mesquite Management Committee | Jo Kuiper |
| Quairading LCDC, Secretary | Rowlie Mellor |
| Rangelands NRM Western Australia, CEO | Gaye Mackenzie |
| Ranger Coordinator Balanggarra Rangers | Thomas Grounds |
| Ranger Coordinator Bardi Jawi Rangers | Damon Pyke |
| Ranger Coordinator Gooniyandi Rangers | Hugh James |
| Ranger Coordinator Karajarri Rangers | Rhys Swain |
| Ranger Coordinator Kija Rangers | Hylke Vader |
| Ranger Coordinator Kimberley Rangers | Damien Parriman |
| Ranger Coordinator Kimberley Rangers | Tom Holyoake |
| Ranger Coordinator Miriuwung Gajerrong Rangers | Trent Stillman |
| Ranger Coordinator Nyikina Mangala Rangers | Dan Keynes |
| Ranger Coordinator Nyul Nyul Rangers | Mark Rothery |
| Ranger Coordinator Paruku Rangers | Jamie Brown |
| Ranger Coordinator Uunguu Rangers | Robert Warren |
| Ranger Coordinator Wunggurr Rangers | Danyel Wolff |
| Ranger Groups Coordinator Kimberley Land Corporation | Jessica O'Brien |
| Regional Leader Nature Conservation: Pibara Region Department of Biodiversity, Conservation and Attractions | Nigel Wessels |
| Research Fellow Invasive Animals CRC | Lyndal-Joy Thompson |
| Roadside Conservation Committee, Chair | Ken Atkins |
| Roebourne-Port Hedland LCDC, Chair | Kim Parsons |
| Roebourne-Port Hedland LCDC, Secretary | Robyn Richardson |
| Sec/Treasurer Carnarvon RBG | Andrew Whitmarsh |
| Senior Research Officer - Weed control DPIRD - Innovative and remote surveillance techniques research | John Moore |
| Serpentine-Jarrahdale LCDC, Chair | Nancy Scade |
| Serpentine-Jarrahdale LCDC, Secretary | Jan Star |
| Sheep and Goats Industry Funding Scheme Management Cttee, Chair | Jeff Murray |
| Sheep Grower Group, Committee | Basil Parker |
| Sheep Industry Alliance, Chair | Robert Egerton-Warburton |
| Sheep Industry Leadership Council WAWDAG/Landholder | Cameron Tubby |
| Shire Councillor, Justice of the Peace, Shire of Bunbury | Murray Cook |
| Shire Esperance, CEO | Matthew Scott |
| Shire Kalgoorlie, CEO | John Walker |
| Shire of Broome, CEO | Ken Donohoe |
| Shire of Collie | Glyn Yates |
| Shire of Coolgardie , CEO | Paul Webb |
| Shire of Derby West Kimberley, CEO | Steve Gash |
| Shire of Yilgarn | Wayne Della-Bosca |
| Shire President Shire of Coolgardie | Malcolm Cullen |
| Shire Wyndham East Kimberley, CEO | Carl Askew |
| South Coast Natural Resource Management, CEO | Justin Bellanger |
| South East Premium Wheat Growers Association, Chair | Greg Curnow |
| South West Biosecurity Group, Chair | Paul Owens |
| South West Biosecurity Group, EO | Kathy Dawson |
| South West Biosecurity Group, Secretary | Bill Bennit |
| Southern Biosecurity | Karyn & Bevan Tuckett |
| Southern DIRT, Chair | Lynley Anderson |
| Stonefruit Grower Rep Fruitwest | Tim Byl |
| Stud Merino Breeders of WA, President | Steven Bolt |
| Supervisor Mt Weld Station | Patrick Hill |
| Sustainable Agriculture Program Manager South West Catchments Council | Steve Ewings |
| Town of East Fremantle | Gary Tuffin |
| Tunney LCDC, Chair | Twynam Cunningham |
| Tunney LCDC, Secretary | Bill Waldron |
| Upper Gascoyne LCDC, Chair | Jason Hastie |
| Upper Gascoyne LCDC, Secretary | Alys McKeough |
| vegetablesWA, EO | John Shannon |
| Vice Chair/Treasurer South West Biosecurity Group | Peter Beatty |
| WA Naturalists, President | Mandy Bamford |
| Waddi Forest LCDC, Chair | Alison Doley |
| Waddi Forest LCDC, Secretary | Fiona Falconer |
| WAFF WAWDAG | Scott Pickering |
| Wagin LCDC, Chair | William White |
| Wagin LCDC, Secretary | Michelle Healy |
| Weeds Society of WA, President | Sandy Lloyd |
| West Australian Herpetological Society, President | Gary Davies |
| West Bush Heritage Australia, EO | Luke Bayley |
| West Kimberley LCDC, Chair | P E Hams |
| West Kimberley LCDC, Secretary | Hans Leenarts |
| West Koojan-Gillingarra LCDC, Chair | John Longman |
| West Koojan-Gillingarra LCDC, Secretary | Ingrid Krockenberger |
| Wild Dog Program Department of Environment and Primary Industries, Community Engagement Officer | Barry Davies |
| Wilderness Society pastoral Pew Trusts, Manager | David McKenzie |
| Wildflower Society of WA Inc., President | Eddy Wajon |
| Woodanilling LCDC, Chair | Trevor Young |
| Woodanilling LCDC, Secretary | Danielle Perrie |
| Yalgoo Shire | Silvio Benzi |
| Yalgoo Shire, President | Neil Grinham |
| Yallingup LCDC, Chair | Dennis Cuthbert |
| Yallingup LCDC, Secretary | Donald Hanran-Smith |
| Woodanilling LCDC, Zone Manager | Veronika Crouch |

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1. This category is applied only to declared pests declared under section 22(2) of the BAM Act, not to section 12 prohibited organisms [↑](#footnote-ref-1)
2. Opuntioid cacti (*Austrocylindroputia* spp., *Cylindropuntia* spp. and *Opuntia* spp.) and Silverleaf nightshade (*Solanum elaeagnifolium*) were declared in December 2014. *Galium spurium* and *G.* *aparine* in June 2015. [↑](#footnote-ref-2)
3. This is still a draft policy and is not yet published or available on-line. The relevant contents are described in the following pages. [↑](#footnote-ref-3)
4. Tables 2 and 3 provide the key criteria for the review. The BAM 1.0 policy is currently undergoing revision, but the criteria and the principles behind them are not expected to change – the actual wording might differ, however. The wording of Tables 2 and 3 will be modified to match any changes presented in the revised BAM 1.0, once approved. [↑](#footnote-ref-4)