



APPENDIX AI - WEED AND PEST MANAGEMENT PLAN

The background image shows a large, leafy tree on a grassy hill. The sun is setting behind the tree, creating a warm, golden glow. In the background, a map of Australia is visible, with the state of Victoria highlighted in a lighter shade. The overall scene is a landscape view from a hilltop.

WEED AND PEST MANAGEMENT PLAN

ISAAC DOWNS EXTENSION PROJECT

Trend  **Environmental
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Prepared on behalf of
**STANMORE ID EXTENSION
PTY LTD**



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1. INTRODUCTION

1.1 PROJECT DESCRIPTION

Stanmore ID Extension Pty Ltd (ID Extension, the Proponent), a wholly owned subsidiary of Stanmore Resources Limited (Stanmore), proposes to develop the Isaac Downs Extension Project (the Project), an open-cut metallurgical coal mine located in the Bowen Basin of central Queensland. The Project is situated approximately 15 kilometres (km) southeast of Moranbah and 150 km southwest of Mackay, and it is an extension of the existing Isaac Plains Complex (IPC), which comprises the Isaac Plains Mine (IPM) and the Isaac Downs Mine (IDM) (Map 1, Appendix A).

The Project will involve the extraction of approximately 46 million tonnes (Mt) of Run-of-Mine (RoM) coal over 15 years, at a production rate of approximately 2–4.5 Mt per annum. RoM coal will be transported to the Coal Handling and Preparation Plant (CHPP) at IPM for processing. The Project will share infrastructure with IDM, including the Mine Infrastructure Area (MIA), water management systems, and access roads.

The Proponent will prepare an Environmental Impact Statement (EIS) under the *Environmental Protection Act 1994* (Queensland; Qld; EP Act) for the Project. The EIS will support an environmental authority (EA) and Progressive Rehabilitation and Closure Plan (PRCP) schedule application under the EP Act. The Project's Referral under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth Cth; EPBC Act) is a controlled action (EPBC 2025/10183). The Project's Referral will be assessed by an accredited assessment process, being the EIS required under the EP Act.

Trend Environmental was commissioned by Stanmore to complete management plans as part of the EIS being prepared for the Project, including a Weed and Pest Management Plan (WPMP).

The Project will require progressive vegetation clearing to facilitate open cut mining operations and associated disturbance activities. This will result in direct and indirect impacts to ecological values including but not limited to habitat removal, edge effects, and spread of weeds and pests. Without management measures, increased pest and invasive weed spread may be caused by vegetation clearing, vehicle movement, waste management, and increased human activity associated with the Project.

The WPMP establishes a framework to prevent the introduction, spread, and establishment of invasive weeds and pests across the Project area¹, including disturbance zones, access roads, rehabilitation areas, and adjacent land.

1.2 OBJECTIVES OF THE WEED AND PEST MANAGEMENT PLAN

The purpose of the WPMP is to outline management and monitoring strategies for controlling and mitigating both existing and potential weed and pest threats within the Project area, including the Disturbance area, access roads, rehabilitation areas, and adjacent habitats.

The Terms of Reference (ToR; issued December 2025) states the Proponent is to propose detailed measures to remove, control and limit the spread of pests, weeds, diseases, pathogens and contaminants on the Project

¹ The Project area is the area of the four ML applications for the Project.



site and any areas under the Proponent's control. This includes declared plants and animals and restricted areas under Queensland's *Biosecurity Act 2014*, the Commonwealth *Biosecurity Act 2015*, Weeds of National Significance (WoNS) and designated pests under the Queensland *Public Health Act 2005*. All proposed measures are to be in accordance with biosecurity surveillance or prevention measures authorised under Queensland's *Biosecurity Act 2014* and aligned with local government pest management priorities.

To comply with the ToR and the *EIS Guideline – Biosecurity* (DESI, 2024), the WPMP includes:

- Measurable objectives for determining the success of risk management measures.
- Monitoring actions, and a schedule for implementing them.
- Corrective actions if monitoring finds risk management measures are not succeeding or have failed.

The measures and strategies within the WPMP align with relevant Commonwealth, State and local biosecurity strategies, plans and priorities including:

- Australian Pest Animal Strategy 2017–2027 (DAWR, 2016a).
- Australian Weeds Strategy 2017–2027 (DAWR, 2017).
- *National Established Weed Priorities Framework* (Weeds Working Group of the Environment and Invasives Committee, 2023).
- Biosecurity surveillance or prevention measures authorised under Queensland's *Biosecurity Act 2014*.
- Nationally significant pest animals, weeds and diseases under the *Commonwealth Biosecurity Act 2015* framework.
- Local government and regional biosecurity plans, specifically the Isaac Regional Council *Biosecurity Plan 2024–2027* (Liveability and Sustainability, 2024).

The WPMP includes but is not limited to:

- A site induction program that provides weed management information to staff, contractors and visitors.
- Detailed control measures aimed at eradicating where possible or otherwise reducing the extent of weeds in accordance with the Queensland Department of Agriculture and Fisheries (DAF) guidelines and the requirements of the *Biosecurity Act 2014* (Queensland; Qld).
- Weed washdown procedures for all vehicles brought to the Project area that will be travelling beyond the office carpark.
- Targeted weed control measures within the Project area.
- Undertaking routine monitoring to verify control effectiveness and detect new weed and pest incursions.
- Appropriate waste management and waste disposal.
- A reporting framework to ensure sightings of weed and pest animals are recorded.
- Site inductions to include information on pest animals including control requirements, importance of appropriate waste management and reporting requirements when pest animals are observed within the site during construction and operation activities.
- Control of pest animals.

Monitoring and review components of the WPMP include:

- Regular inspections of haul roads, infrastructure areas, overburden areas, rehabilitation zones, and soil stockpiles.
- Weed mapping and density recording using Geographic Information System (GIS) to inform adaptive management.
- Annual review of the WPMP effectiveness, with updates following new incursions or changes to legislation or policy.
- Trigger thresholds (e.g. increases in infestation extent or density) to initiate corrective management actions.



2. REGULATORY FRAMEWORK

There are legislative obligations under the Commonwealth, State and local Governments to manage weeds and pests. This Section outlines the regulatory framework for weed and pest management relevant to the Project.

2.1 COMMONWEALTH FRAMEWORK

The EPBC Act provides a national framework for the protection of Australia's biodiversity and places of environmental significance, including the management of impacts to threatened species and ecological communities arising from invasive species. Under Part 13 of the EPBC Act, processes that threaten the survival, abundance or evolutionary development of a native species or ecological community may be listed as key threatening processes. These processes are addressed through the preparation and implementation of Threat Abatement Plans under Part 13 of the EPBC Act.

Threat abatement plans establish national research, management and other actions intended to support the long-term persistence of affected native species and ecological communities. Outside Commonwealth areas, implementation of national threat abatement plans occurs, where relevant, in cooperation with State and Territory Governments.

The following threat abatement plans are relevant to the Project and have been considered in development of the plan:

- Threat abatement plan for predation by Feral Cats (DoE, 2015).
- Threat abatement plan for competition and land degradation by Rabbits (DoEE, 2016).
- Threat abatement plan for competition and land degradation by unmanaged goats (DEWHA, 2008b).
- Threat abatement plan for predation by European Red Fox (DEWHA, 2008c).
- Threat abatement plan for predation, habitat degradation, competition and disease transmission by Feral Pigs (*Sus scrofa*) (2017) (DoEE, 2017) and;
- Threat abatement plan for the biological effects, including lethal toxic ingestion, caused by Cane Toads (DSEWPC, 2011).
- Threat abatement plan for disease in natural ecosystems caused by *Phytophthora cinnamomi* (DoEE, 2018).
- Threat abatement plan to reduce the impacts on northern Australia's biodiversity by the five listed grasses (DSEWPaC, 2012)

Additional national strategies and frameworks have also been developed to address the impacts of invasive species at a national scale. The frameworks relevant to the Project are listed in Table 1 and, where applicable, have been considered in development of the plan.



Table 1
Additional
national
frameworks for
weed and pest
management

Framework	Description
<i>Australian Weeds Strategy 2017–2027</i> (DAWR, 2016b)	The <i>Australian Weeds Strategy 2017–2027</i> provides a national framework for best-practice weed management, supporting coordinated action across State and Territory governments, local governments, natural resource management agencies, industry, landholders and the broader community. The strategy also identifies 32 WoNS as priorities for coordinated management. WoNS cause significant economic, environmental and/or social impacts across multiple jurisdictions, with strong potential for further spread. These species require coordinated and strategic management across all levels of government to prevent, eradicate, contain and/or reduce impacts. Best-practice national management plans have been developed for individual listed species. Regulation of these species is implemented through local, regional, and State or Territory frameworks, with responsibility for management resting with landowners and land managers in accordance with applicable requirements.
<i>Australian Pest Animal Strategy 2017–2027</i> (DAWR 2016a)	The <i>Australian Pest Animal Strategy 2017–2027</i> provides national guidance for managing the impacts of vertebrate pest animals and preventing the establishment of new pest species. The strategy also identifies further national action plans for species of particular significance, including the National Wild Dog Action Plan 2020–2030 and the National Feral Pig Action Plan 2021–2031, both of which are relevant to the Project.
<i>National Established Weed Priorities Framework</i> (Weeds Working Group of the Environment and Invasives Committee, 2023)	The <i>National Established Weed Priorities Framework</i> is a new national established weed framework to guide future collaboration to manage established weeds in Australia. The NEWP aims to add new weeds to the WoNS list and will focus on weed issues beyond a specific species. The Framework seeks to reduce the economic, environmental and social impacts of weeds Through new WoNS listings, Weed Issues of National Significance (WINS), a National Established Weed Action List (NEWAL) and a Virtual Weed Information Hub.
<i>National Wild Dog Action Plan 2020–2030</i> (AWI 2020)	The <i>National Wild Dog Action Plan 2020–2030</i> establishes a national framework to promote and support a strategic, risk-based approach to wild dog management, with the aim of reducing impacts to agricultural, biodiversity and social values. Implementation occurs through national, State, Territory and regional organisations.
<i>National Feral Pig Action Plan 2021–2031</i> (NFPAP Steering Group 2021)	The <i>National Feral Pig Action Plan 2021–2031</i> provides national leadership and support for land managers undertaking feral pig management to reduce risks to environmental values, agricultural enterprises, cultural heritage and biosecurity. The Plan has been developed in alignment with Commonwealth and State/Territory legislation and policy guidance.
National Codes of Practice	The <i>National Codes of Practice</i> (CoP) set out national principles for humane pest animal management for relevant vertebrate pest species. These principles are applied across jurisdictions, subject to the legislative requirements of the relevant State or Territory. Pest control measures proposed under the plan have been developed in accordance with the relevant Codes of Practice.
National Standard Operating Procedures	The <i>National Standard Operating Procedures</i> (NATSOPs) provide summary guidance on current best-practice methods for the humane treatment of vertebrate pests. These procedures are to be applied subject to the legal requirements of the jurisdiction in which works are undertaken. All pest control methods involving the killing of an animal should comply with <i>NATSOP-GEN001: Methods of euthanasia</i> (Sharp, 2016). Relevant species-specific procedures have been considered for the pest species within this WPMP.



2.2 STATE GOVERNMENT FRAMEWORK

The *Biosecurity Act 2014* (Qld) is Queensland's primary legislative instrument for the management of invasive species, including the statutory obligations relating to weed and pest management. The Biosecurity Regulation 2016 (Queensland) (Biosecurity Regulation) supports implementation of the Biosecurity Act by prescribing how the Act is to be applied.

The *Biosecurity Act 2014* (Qld) establishes the General Biosecurity Obligation (GBO), which requires a person to take all reasonable and practical steps to prevent or minimise each biosecurity risk, minimise the likelihood of a biosecurity event, and prevent or minimise the harmful effects that such a risk may cause (DPI, 2026). This obligation includes requiring occupiers of land on which invasive species occur to take all reasonable and practical measures to prevent or minimise adverse biosecurity impacts associated with biosecurity matter, including listed invasive species.

Biosecurity risks may relate to human health, social amenity, the economy, or the environment. Accordingly, management of invasive species forms a key component of compliance with the GBO, as failure to appropriately manage such species may increase the likelihood and severity of adverse biosecurity impacts. The GBO also applies more broadly to any person undertaking activities involving invasive species or potential carriers, including the movement of animals, plants, turf, soil, machinery and equipment.

Under the *Biosecurity Act 2014* (Qld), certain invasive species are classified as prohibited matter (Schedule 1) or restricted matter (Schedule 2). Prohibited matter comprises species not currently present in Queensland, but which could have significant adverse effects on human health, social amenity, the economy and/or the environment if introduced. A person who becomes aware of prohibited matter at a place they occupy, or control must notify an authorised officer under section 36 of the Biosecurity Act. Actions that may exacerbate the biosecurity risk posed by prohibited matter must not be undertaken, while reasonable actions to minimise that risk must be implemented.

Restricted matter comprises species that are present in Queensland and that may cause significant adverse impacts if not subject to regulatory controls. The spread and impacts of restricted matter are managed by measures to reduce, control or contain the matter in accordance with the applicable restriction categories (Categories 1 to 7) prescribed under the Biosecurity Act. More than one category may apply to a single biosecurity matter.

The legislative responsibilities associated with restricted matter include the following:

- A person must notify an authorised officer if they become aware of Category 1 or Category 2 restricted matter at a place they occupy or control, and must not undertake actions that may worsen the associated biosecurity risk;
- Category 3 restricted matter must not be distributed or disposed of other than in accordance with section 43 of the *Biosecurity Act 2014* (Qld);
- Category 4 restricted matter must not be moved;
- Category 5 restricted matter must not be kept in a person's possession or under their control;
- Category 6 restricted matter must not be fed; and
- Category 7 restricted matter must be killed and disposed of by burying the entire carcass above the high tide mark or placing it in a waste disposal receptacle.

Additional State legislation and policy frameworks also regulate or guide the management of impacts associated with invasive species. The relevant frameworks are listed in Table 2 and have been considered in development of the WPMP.



Table 2
Additional State
frameworks for
weed and pest
management

Framework	Description
<i>Environmental Protection Act 1994</i> (EP Act; Qld)	The EP Act provides for environmental management and environmental safeguards. It requires all reasonable and practicable measures to be taken to prevent or minimise environmental harm, including harm that may arise through weed and pest management activities.
<i>Nature Conservation Act 1992</i> (NC Act; Qld), <i>Nature Conservation (Plants) Regulation 2020</i> (Qld), and <i>Nature Conservation (Animals) Regulation 2020</i> (Qld)	The NC Act provides for the conservation and management of native flora and fauna, including restrictions on the taking, use or destruction of protected wildlife without authorisation. The Dingo is recognised as native wildlife under the NC Act and is protected as a natural resource within Queensland national parks. However, under Schedule 1 of the <i>Nature Conservation (Animals) Regulation 2020</i> (Qld), the Dingo is specifically excluded from the definition of protected wildlife in Queensland. Outside prescribed conservation areas, protections under the NC Act do not apply and the species is regulated under the <i>Biosecurity Act 2014</i> (Qld) as a restricted invasive animal.
<i>Vegetation Management Act 1999</i> (VM Act; Qld)	The VM Act regulates the clearing of native vegetation, including clearing undertaken for weed management, where such works are carried out in accordance with the relevant accepted development vegetation clearing code, including the <i>Accepted Development Vegetation Clearing Code: Managing Weeds</i> (Department of Resources; DoR, 2023).
<i>Agricultural Chemicals Distribution Control Act 1966</i> (ACDC Act; Qld) and <i>Agricultural Chemicals Distribution Control Regulation 2021</i> (ACDC Regulation; Qld)	The ACDC Act regulates the use of agricultural chemicals, including herbicides, in Queensland. However, the Act does not apply in areas excluded under Schedule 1 of the ACDC Regulation. The Project area is not within the exclusion area.
<i>Chemical Usage (Agricultural and Veterinary) Control Act 1988</i> (Chemical Usage Control Act; Qld) and <i>Chemical Usage (Agricultural and Veterinary) Control Regulation 2017</i> (Chemical Usage Control Regulation; Qld)	The Chemical Usage Control Act regulates the use of agricultural and veterinary chemical products in Queensland. Agricultural chemical products, including herbicides, must be used in accordance with label instructions unless an alternative use is authorised by permit or regulation.
<i>Medicines and Poisons Act 2019</i> (MPA; Qld) and <i>Medicines and Poisons (Pest Management Activities) Regulation 2021</i> (MP Regulation; Qld)	The MPA regulates the possession, supply and use of poisons for pest management activities.
<i>Animal Care and Protection Act 2001</i> (Animal Care and Protection Act; Qld)	Section 42 of the Animal Care and Protection Act permits the control of pest and feral animals, provided the method used causes the animal as little pain as is reasonable, complies with relevant animal welfare requirements, and does not involve a prohibited control method.
<i>Weapons Act 1990</i> (Weapons Act; Qld)	The Weapons Act regulates the possession and use of firearms on property, including for pest management.
Queensland Invasive Plants and Animals Strategy 2025–2030 (DPI 2024; Qld)	The <i>Queensland Invasive Plants and Animals Strategy 2025–2030</i> provides the State framework for addressing the impacts of invasive plants and animals in Queensland and reducing the introduction of new exotic species. It establishes six themes and associated objectives to guide stakeholders undertaking weed and pest management. These themes are discussed further in this WPMP.



2.3 LOCAL GOVERNMENT FRAMEWORK

Under the *Biosecurity Act 2014* (Qld), local governments are required to prepare biosecurity plans addressing relevant invasive species within their local government area. Relevant biosecurity matter for a region includes WoNS and/or restricted biosecurity matter known to occur within the region, as well as any locally declared invasive species identified under local laws made pursuant to the *Local Government Act 2009* (Qld).

The local government framework relevant to the Project is the *Isaac Regional Council Biosecurity Plan 2024–2027* (Liveability and Sustainability, 2024). Consistent with the risk-based management approach established under the *Biosecurity Act 2014* (Qld), the Plan identifies priority prohibited matter, restricted matter and locally significant invasive species within the Isaac Region. Appendix B lists the priority species identified in the Plan and summarises the simplified risk assessment framework used to determine the appropriate management phase for each species.



3. EXISTING ENVIRONMENT

3.1 SITE CONTEXT

The Project area is situated within the Brigalow Belt bioregion, which spans approximately 216,000 km² across central Queensland and northern New South Wales (NSW), extending from Townsville in the north, to Narrabri in the south (Sattler & Williams, 1999). The Brigalow Belt bioregion is divided under the Interim Biogeographic Regionalisation for Australia (IBRA) into two IBRA regions: the Brigalow Belt North and Brigalow Belt South. The Project area occurs within the Brigalow Belt North bioregion, which spans an area of 135,500 km² and is home to a diverse range of flora and fauna (Young, et al., 1999).

The Project area is also located within the Fitzroy Basin, one of Queensland's largest and most economically significant drainage basins. More specifically, it lies entirely within the Isaac River drainage sub-basin, which forms part of the broader Fitzroy Natural Resource Management (NRM) region. The Isaac River sub-basin spans approximately 22,364 km², encompassing the regional centres of Moranbah, Dysart, and Nebo (DERM, 2011). Within this sub-basin, the Project is situated across the Isaac River and Cherwell Creek catchments, with a dense network of minor tributaries and ephemeral drainage lines intersecting the Project area.

The Project area has a long history of cattle grazing, predominantly associated with Winchester Downs Station. As a result, vegetation communities have been subject to historical clearing, fragmentation and grazing-related modification, with varying levels of regrowth and remnant persistence.

Vegetation within the Project area is representative of the broader Bowen Basin landscape, which has been extensively modified by pastoral land use. The vegetation mosaic comprises non-remnant pasture, remnant vegetation, dieback-affected remnant vegetation and regrowth at various stages of structural and floristic recovery, reflecting the long-term influence of grazing and land management practices.

Riparian vegetation occurs along Isaac River, Cherwell Creek and Conrock Gully, providing important linear habitat connectivity for fauna species across the Project area. The riparian zones of the Isaac River and Cherwell Creek are dominated by *Eucalyptus camaldulensis* (River Red Gum), *Eucalyptus tereticornis* (Queensland Blue Gum), *Corymbia clarksoniana* (Clarkson's Bloodwood) and *Corymbia tessellaris* (Moreton Bay Ash). Patches of ephemeral wetland habitat also occurs within the Project area, typically dominated by *Eucalyptus camaldulensis*, *Eucalyptus tereticornis* and/or *Eucalyptus coolabah*. In contrast, the riparian habitat of Conrock Gully is generally characterised by a mix of *Eucalyptus coolabah* (Coolibah), *Acacia harpophylla* (Brigalow) and *Eucalyptus populnea* (Poplar Box).

3.2 SURVEY METHODOLOGY AND SURVEY EFFORT

Trend Environmental has completed targeted field ecological surveys within the Project area and surrounds to support ecological documentation for the EIS. During these surveys, weed and pests were recorded.

Table 3 provides a summary of the terrestrial ecology surveys conducted for the Project that have involved weed and pest identification. The results of these surveys have been considered when determining the pre-existing state of the environment within the Project area.



Table 3
Summary of
ecological
surveys for
the Project

Survey Dates	Season	Summary of Survey Methods
4 - 8 November 2024	Late dry season	Reconnaissance Survey - Verification of REs, vegetation communities and TECs
18 - 26 November 2024	Late dry season	Targeted Survey - Verification of REs and TECs, Habitat Quality Assessments, Targeted survey methods
5 - 10 May 2025	Late wet season	Targeted Survey - Verification of REs and TECs, Habitat Quality Assessments, Targeted survey methods
19 - 24 May 2025	Late wet season	Targeted Survey - Verification of REs and TECs, Habitat Quality Assessments, Targeted survey methods

3.3 WEED SPECIES PRESENCE

Large areas of the Project area have previously undergone vegetation clearing to develop improved pastureland for cattle grazing, and as such, areas of high disturbance are present. This has produced favourable conditions for weeds and led to a local dominance of exotic grasses and other weeds.

A total of 36 weed species were recorded within the Project area and surrounds during field surveys (weed species list provided in Appendix C). Weed species were generally concentrated in non-remnant areas; however, weed species were also recorded within the ground and shrub layers of remnant and regrowth habitats.

Parthenium hysterophorus (Parthenium)*, *Lantana camara* (Lantana)* and *Harrisia martinii* (Harrisia Cactus)* are the most common species throughout the Project area.

Of the weed species recorded, twelve are listed as Category 3 restricted matters under the *Biosecurity Act 2014* (Qld; as listed in Schedule 2, Part 2) and eight species are identified as WoNS. The *Isaac Region Biosecurity Plan 2024–2027* (Liveability and Sustainability, 2024) also identifies priority weed species of environmental, economic, or social concern within the Region with twelve species identified.

Accounting for overlap between these legislative and policy frameworks, a total of 14 weed species are considered priority weeds for control under this WPMP. These priority weed species, along with their legislative status and management priority, are provided in Table 4. The locations of these species within the Project area and surrounds is provided in Map 2, Appendix A.

For the purposes of this assessment, priority weeds are defined as species that meet one or more of the following criteria:

- Listed as a WoNS;
- Classified as a restricted matter under the *Biosecurity Act 2014* (Qld);
- Identified on the invasive species priority list within the *Isaac Regional Council Biosecurity Plan 2024–2027*; or
- Considered capable of causing significant adverse environmental impacts.



Table 4
Priority weed
species
recorded within
the Project area
and surrounds

Scientific Name	Common Name	WoNS ¹	Biosecurity Matter ²	Priority Weeds ³
<i>Bryophyllum daigremontianum</i> *	Mother of Millions	-	Restricted Category 3	Yes
<i>Cryptostegia grandiflora</i> *	Rubber Vine	Yes	Restricted Category 3	Yes
<i>Harrisia martinii</i> *	Harrisia Cactus	-	Restricted Category 3	Yes
<i>Hymenachne amplexicaulis</i> *	Hymenachne	Yes	Restricted Category 3	Yes
<i>Jatropha gossypifolia</i> *	Bellyache Bush	Yes	Restricted Category 3	Yes
<i>Lantana camara</i> *	Lantana	Yes	Restricted Category 3	Yes
<i>Lantana montevidensis</i> *	Creeping Lantana	-	Restricted Category 3	-
<i>Leucaena leucocephala</i> *	Leucaena	-	-	Yes
<i>Opuntia tomentosa</i> *	Velvety Prickly Pear	Yes	Restricted Category 3	Yes
<i>Opuntia stricta</i> *	Prickly Pear	Yes	Restricted Category 3	Yes
<i>Neptunia oleracea</i> *	Water Mimosa	-	Restricted Category 2, 3, 4, 5	-
<i>Parthenium hysterophorus</i> *	Parthenium Weed	Yes	Restricted Category 3	Yes
<i>Vachellia nilotica</i> *	Prickly Acacia	Yes	Restricted Category 3	Yes
<i>Vachellia farnesiana</i> *	Mimosa Bush	-	-	Yes

¹ WoNS = Weed of National Significance

² A biosecurity matter refers to matters which are listed under the Biosecurity Act 2014 (Qld). A 'Restricted matter' refers to a biosecurity matter found in Queensland which has a significant impact on social, economic, health or environment.

³ Priority weeds within the Isaac Region Biosecurity Plan 2024 - 2027.

3.4 PEST SPECIES PRESENCE

Seven pest species were recorded within the Project area and surrounds during field surveys (Table 5; pest species list provided in Appendix D). These included the Cane Toad* (*Rhinella marina*), Wild Dog* (*Canis familiaris*), European Fox* (*Vulpes vulpes*), Feral Cat* (*Felis catus*), and Feral Red Deer* (*Cervus elaphus*), European Rabbit (*Oryctolagus cuniculus*),*and Feral Pig* (*Sus scrofa*). Domestic Cattle (*Bos taurus*)*were not included as pests in Table 5 as they are present on the property as part of existing grazing operations.

Several of the identified pest species are recognised as restricted matters under the *Biosecurity Act 2014* (Qld) and/or listed as priority pest species under the *Isaac Region Biosecurity Plan 2024–2027* (Table 5).

For the purpose of the WPMP, all pest species recorded in the Project area and surrounds are considered priority pest species as each belong to at least one of the following categories:

- A pest species listed as a restricted matter under the *Biosecurity Act 2014* (Qld);
- A pest species listed as an invasive species priority list within the *Isaac Regional Council Biosecurity Plan 2024–2027*; or
- Another pest species with the potential to cause a substantial adverse environmental impact.

While most of these species were not strongly associated with a specific habitat type within the Project area, the Cane Toad* was observed in higher concentrations across alluvial and wetland areas, and Feral Cats* and Wild Dogs* were recorded where there was adequate canopy cover within remnant and regrowth polygons.



The presence of these pest species has the potential to contribute to ongoing ecological pressures through predation, grazing, competition with native fauna, and habitat disturbance.

The locations of where these species were recorded within the Project area and surrounds is provided in Map 3, Appendix A.

Table 5 Pest species recorded within the Project area	Type	Species	Biosecurity Matter ¹	Priority Pests ²	Habitat Suitability
	Pest Amphibians	Cane Toad, <i>Rhinella marina</i> *	-	-	All habitat types
	Pest Mammals	Wild Dog, <i>Canis familiaris</i> *	Restricted Category 3,4,6	Listed Priority Pest	All habitat types
		Fox, <i>Vulpes vulpes</i> *	Restricted Category 3,4,5,6	-	All habitat types
		Feral Cat, <i>Felis catus</i> *	Restricted Category 3,4,6	Listed Priority Pest	All habitat types
		Feral Red Deer, <i>Cervus elaphus</i> *	Restricted Category 3,4,6	Priority Pest	All habitat types
		European Rabbit, <i>Oryctolagus cuniculus</i> *	Restricted Category 3,4,5,6	-	All habitat types
		Feral Pig, <i>Sus scrofa</i> *	Restricted Category 3,4,6	Priority Pest	All habitat types

¹ Biosecurity matter refer to matters which are listed under the Biosecurity Act. 'Prohibited' matters are biosecurity matter that are not currently present in Queensland, but would have a significant adverse social, economic, health or environment impact on if it entered the state. 'Restricted matter' refers to biosecurity matter found in Queensland which have a significant impact on social, economic, health or environmental issues.

² Priority pests within the Isaac Region Biosecurity Plan 2024 - 2027.



4. MANAGEMENT STRATEGY

4.1 PRINCIPLES OF MANAGEMENT

The *Queensland Invasive Plants and Animals Strategy* (DPI, 2024) identifies the following key themes underpinning effective weed and pest management:

1. Integration, collaboration and coordination
2. Strategic risk-based planning
3. Shared responsibility and commitment
4. Capability building through education and awareness
5. Prevention, preparedness and early intervention
6. Best practice and research
7. Monitoring and evaluation

The strategy for the WPMP has been developed with regard to these themes.

4.2 STRATEGIC MANAGEMENT APPROACH

Effective management of weed and pest populations requires aligning control measures with the efficient allocation of resources. Government frameworks at Commonwealth, State, and local levels commonly apply a generalised invasion curve to guide this process. This framework links management responses to the density and stage of invasion within a given area, enabling the selection of appropriate strategies. These typically include preventing initial establishment, eradicating emerging populations, containing established infestations within defined boundaries, and implementing asset-based protection to reduce impacts where widespread control is no longer feasible (Figure 1).

The invasion curve can be applied across a range of spatial scales to inform appropriate management responses for weed and pest populations, from site-based control through to regional prioritisation. The *Isaac Regional Council Biosecurity Plan 2024 – 2027* provides a regional framework for management of priority weed and pest species, taking into account factors such as species distribution, feasibility of control, cost-effectiveness and associated risk.

As invasive species become more widespread and established, the cost, complexity and likelihood of successful control increase substantially. Accordingly, prevention and early intervention represent the most effective management responses. Consistent with this principle, management under this WPMP will prioritise prevention, early detection and rapid response for all weed and pest species. In addition to managing species that are already widespread at the regional scale, the strategy of the WPMP will seek to prevent the introduction of new species and, where feasible, achieve local eradication of species that have not yet established within the Project area.

Weed and pest monitoring will be undertaken to detect new incursions, assess the status of existing infestations and evaluate the effectiveness of implemented control measures. Where a species identified during monitoring or incidental observations is confirmed as prohibited matter or restricted matter in Categories 1 or 2 under the *Biosecurity Act 2014* (Qld), the relevant authorised officer will be notified



immediately prior to implementation of any control actions. Where a new incursion involves restricted matters in Categories 3 to 7, management will be undertaken in accordance with the applicable legislative requirements of the *Biosecurity Act 2014* (Qld).

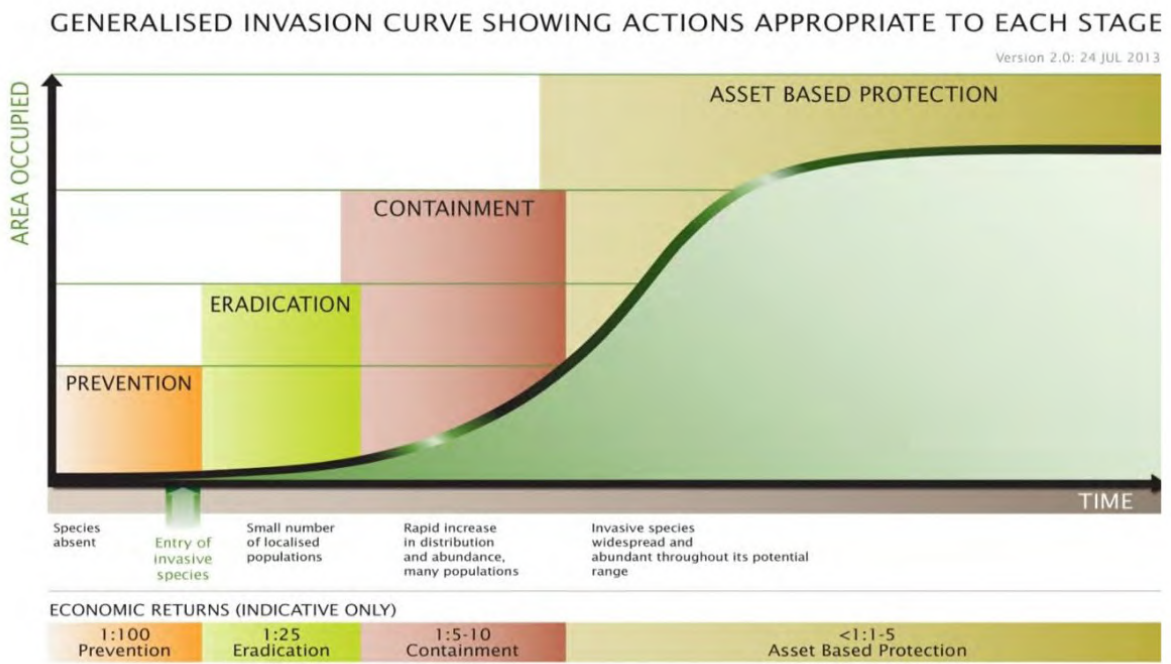
For existing weed and pest populations, control measures will be applied in a manner appropriate to the relevant management stage, being eradication, containment or asset protection.

Based on *Isaac Regional Council Biosecurity Plan 2024 – 2027* classifications and known regional distributions, the abundance and distribution of all of the priority-listed weed and pest species within the region align with the asset protection stage of the invasion curve (Figure 1). The Isaac Regional Council invasive species priority list and their corresponding management phase is provided in Appendix B. At the asset protection stage, management is directed toward reducing impacts on key environmental values rather than attempting eradication.

For priority weed and pest species already established within the Project area and managed under the asset protection stage, eradication is not considered a realistic outcome given the extent of infestation and associated cost. Accordingly, management will focus on containment and, where practicable, reduction in population extent or density. Recommended control measures for priority weed and pest species are outlined in the following sections.

To support strategic allocation of resources and effective implementation of control measures, an annual prioritisation schedule will be prepared as part of the control cycle. A recommended control cycle for the Project is provided in Figure 2..

Figure 1
Generalised
invasion curve
and related
management
stages



Source: Biosecurity Strategy for Victoria (2009)

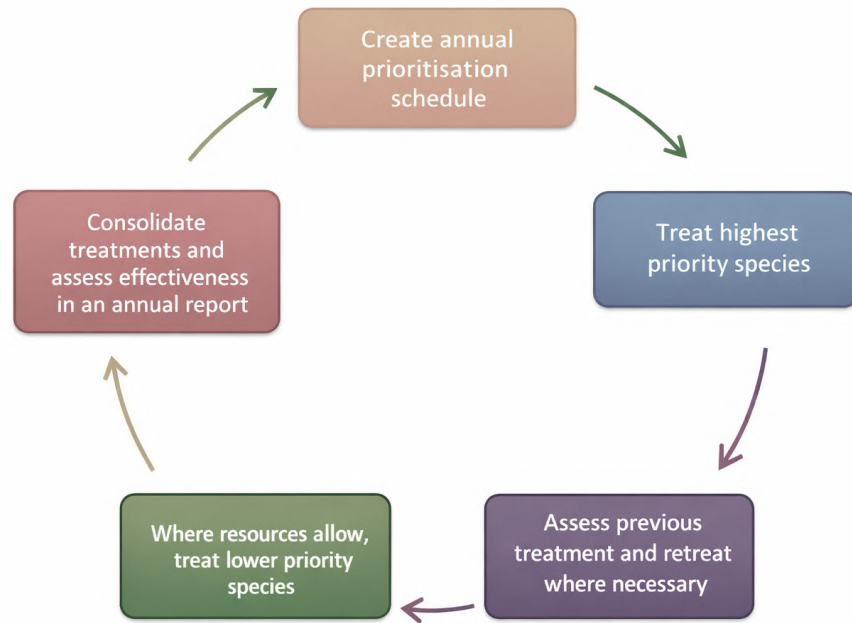


Figure 2
Effective weed
and pest
management
control cycle



5. WEED MANAGEMENT

Effective weed management requires a coordinated approach that combines prevention, ongoing monitoring, and appropriate control strategies. These strategies may include chemical, physical, and biological methods, selected based on the specific weed species and site conditions, such as infestation density and location.

Table 6 summarises the key prevention, monitoring, and control measures for this WPMP, while Appendix E outlines species-specific management approaches for priority weeds identified within the Project area.



Table 6
Weed
management
actions

Management Action	Timing and Frequency	Responsible person(s)	Success criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
PREVENTION					
Hygiene protocols for vehicles and machinery. Vehicle and machinery hygiene protocols are intended to ensure that all vehicles and equipment entering the Project area are free of soil and plant material. These protocols apply to all machinery entering the Project area, including light vehicles, heavy vehicles and mobile plant. The protocols include: - All vehicles and machinery brought onto the Project area must be free of soil and plant material at the time of entry. Machinery must be cleaned as necessary to prevent weed movement within the Project area. Refer to the Timing and Frequency column for trigger points. - A weed seed declaration is required for machinery undertaking high-risk activities, and vehicles and machinery are to be maintained in a clean condition thereafter. - Vehicles are to remain on designated roads and tracks and wherever practicable, avoid areas infested with invasive plants, particularly during seed set. - Boots and equipment are to be cleaned after leaving known infested areas. Decontamination of vehicles is to include removal of soil and seed using appropriate methods such as compressed air or high-pressure water to remove rubbish, debris and mud. A foot bath containing water and detergent may be used to ensure boots are free of pests and pathogens. - Cleaning activities must be managed to ensure that wash-down water and detergents do not enter waterways or stormwater drains, as nutrient-enriched runoff and soil may promote weed establishment. - A wash-down facility to be available during Project construction and operations (this may be external to the Project area such as a third party operated facility or a facility at IPM or IDM). Cleaning records, including the date, time, location and procedures followed, are to be completed for vehicles and machinery involved in high-risk activities and for vehicles and machinery mobilised for permanent work on site.	Initial and follow-up cleaning is to occur for vehicles operating within the Project area where any of the following high-risk activities apply: - Prior to commencing work in areas involving topsoil stockpiles or vegetation; - Prior to entering areas identified as weed-free; and - Following operations in areas containing priority weed infestations.	All site personnel. Suitably trained Weed and Seed Hygiene Inspector for issuance of weed hygiene declarations.	- Success criteria include: - Vehicle and machinery cleaning facilities are maintained in a functional and accessible condition. - All relevant vehicles and machinery undergo wash-down as required. - Cleaning methods comply with all applicable statutory and regulatory requirements. - Wash-down logbooks and cleaning records are complete, accurate and consistent with documented vehicle movements. - Wash-down records and weed seed declarations are submitted by staff and contractors within required timeframes. - Weed seed declarations verify that vehicles and machinery have been inspected and are free of soil and plant material. Declarations are required on entry for permanent vehicles and for operations in high-risk areas.	- Vehicle and machinery cleaning facilities, and associated roads and access tracks, to be monitored for weed presence and new incursions. - Where unsatisfactory levels of weed infestation or novel invasions are identified in areas associated with vehicle movement, weed control measures to be implemented and cleaning procedures reviewed and revised as necessary. - Any non-compliance with weed seed declaration requirements to be recorded and reported internally to inform corrective actions.	<i>Biosecurity Act 2014 (Qld)</i> <i>Vehicle and Machinery Cleandown Procedures (DPI, 2024)</i>
Restrictions on moving plant material, soil and related equipment To minimise the spread of pests and diseases, the movement of plant material, soil and associated equipment within Queensland is regulated under biosecurity legislation. All materials brought into the Project area must be sourced from certified weed-free locations and comply with all relevant biosecurity certification requirements. Reasonable due diligence must also be undertaken to confirm the presence or absence of weeds at the source location and to ensure that any required treatment has been applied prior to transport.	Biosecurity certification is to be documented and provided on site entry, or prior to delivery of any plant material, soil or related materials into the Project area.	Site Environmental Officer or Site Supervisor	- Success criteria include: - Source locations for all imported materials hold valid biosecurity certification. - Source locations have been assessed or verified as weed-free prior to import. - Records and certification confirm that all imported materials originate from certified weed-free sources.	- Imported soil and other materials to be monitored for weed presence and new infestations. - Where unacceptable levels of weed infestation or new incursions are detected in areas associated with imported materials, appropriate control measures to be implemented. - Details of monitoring, treatment areas, control actions and any non-compliances with biosecurity certification requirements to be reported internally.	<i>Biosecurity Act 2014 (Qld)</i> <i>Queensland Biosecurity Manual (DAF 2023)</i>
Exclusion zones Exclusion zones should be established around high-risk or novel infestations to minimise vehicle and personnel movement through areas with a high likelihood of spread, including during seed set.	To be implemented as required based on weed infestation assessments and incidental observations.	Site Environmental Officer or Site Supervisor	- Success criteria include: - Movement through exclusion zones is minimised.	- Once established, exclusion zones to be monitored regularly to determine the appropriate duration of implementation. - Exclusion zones may be removed once the risk of spread has reduced, for example following seed dispersal. Where the risk increases again, exclusion zones to be reinstated as necessary. - All amendments to exclusion zones to be documented in reporting.	<i>Biosecurity Act 2014 (Qld)</i>
Weed disposal	As required, depending on weed species and	Site Environmental	Success criteria include:	Monitoring, reporting, and adaptive management to be conducted in accordance	<i>Biosecurity Act 2014 (Qld)</i> EP Act



Management Action	Timing and Frequency	Responsible person(s)	Success criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
All waste to be managed in accordance with the Project's non-mining waste management procedures. Where disposal of Category 3 restricted biosecurity matter under the <i>Biosecurity Act 2014</i> (Qld) is required as part of weed control activities, disposal must comply with the requirements of the <i>Biosecurity Regulation 2016</i> (Qld), including: - Burial of weed material at sufficient depth to prevent regrowth from seed or vegetative fragments. - Transport to an approved waste facility in sealed containers or covered vehicles to prevent spread during transit.	timing of management activities.	Officer or Site Supervisor All site personnel	Waste is managed in accordance with the non-mining waste management procedures	with the non-mining waste management procedures.	Relevant EA conditions
Minimise soil disturbance in retained habitat Minimising soil disturbance in retained habitat helps to maintain weed seeds in a buried and dormant state, thereby reducing large-scale weed recruitment. Retaining undisturbed areas dominated by native species also helps maintain competitive resistance to weed invasion. Avoiding unnecessary disturbance further reduces physical spread of weeds across the landscape	All year	All site personnel	- Success criteria include: - Native vegetation cover remains and weed levels remain low within retained areas - No unauthorised machinery access in retained habitat - Absence or a minimum of new disturbance patches within retained habitat	Maps identifying retained habitat within the Project area to be made accessible to all site personnel. Retained habitat to be inspected for weed presence and new incursions.	<i>Biosecurity Act 2014</i> (Qld)
MONITORING					
Annual monitoring to ensure early detection Annual on-ground weed surveys to be undertaken across the Project area to identify weed species present. Survey data to be collected at sufficient detail to characterise weed distribution and abundance and to inform preparation of the annual weed management prioritisation schedule. These surveys to be used to detect temporal changes in weed populations and, where feasible, quantify infestation density.	February to March, optimally approximately four weeks after general rainfall to maximise growth and improve species identification. Annually.	Environmental Officer and suitably qualified contractor	- Success criteria include: - Annual surveys are completed. - New weed species and infestations, including their density where applicable, are recorded.	Any variation to survey timing, methodology or related aspects to be documented and, where necessary, adjustments to be made for subsequent monitoring events. Weed survey reports to be retained for record keeping.	<i>Biosecurity Act 2014</i> (Qld)
Post-treatment monitoring Treatment sites to be inspected to assess the effectiveness of implemented control measures. Inspections will assess the methods applied, determine whether follow-up treatment is required and, where feasible, estimate infestation density. Data collected during weed surveys will meet the minimum attribute requirements for identifying and monitoring weed sites as defined by McNaught et al. (2008)	No sooner than four weeks after the initial treatment, to allow for dieback and/or regrowth to be detected. Repeated following all treatments.	Environmental Officer and suitably qualified contractor	- Success criteria include: - Monitoring events are completed and all required data, including infestation density, are recorded in accordance with McNaught et al. (2008)	- Where monitoring is undertaken at a suboptimal time, the reason to be documented and the timing of subsequent monitoring adjusted accordingly. - Weed survey reports from the relevant monitoring period to be used to demonstrate weed management outcomes. - Inspection reports, field notes and photographic records to be retained as supporting evidence.	<i>Biosecurity Act 2014</i> (Qld)
CONTROLS					
Undertake rapid response weed control Weed infestations to be targeted at an early stage, when populations are small, localised and more feasible to eradicate. This will involve timely detection, assessment and treatment of new or emerging infestations, ideally prior to flowering and seed set.	As soon as practicable following detection of an infestation and in accordance with the measures in Appendix E.	Environmental Officer and suitably qualified contractor	- Success criteria include: - Weed outbreaks contained and managed effectively and in a timely manner.	Any delays should be avoided but if they occur, they should be reported.	<i>Biosecurity Act 2014</i> (Qld)
Complete an annual prioritisation schedule for weed control A prioritisation schedule of priority areas of the Project area to be completed which identifies the priority weeds and locations to be treated annually. When developing the annual prioritisation schedule for the Project area, treatment priorities are determined based on the invasion and management stages of priority weeds identified within the Project area. This assessment draws on data from previous monitoring, as well as incidental observations. The following hierarchy is then applied to guide treatment prioritisation: - WoNS not previously recorded within the Project area; - Prohibited or restricted matters under the <i>Biosecurity Act 2014</i> (Qld) not previously recorded within the Project area;	Prioritisation schedule prepared annually.	Environmental Officer and suitably qualified contractor	- Success criteria include: - Treatment locations are recorded manually and/or in GIS.	Previous annual prioritisation schedule to be reviewed and updated to include new or changed weed infestations.	<i>Biosecurity Act 2014</i> (Qld) <i>Isaac Regional Council Biosecurity Plan 2024 - 2027.</i> ACDC Act (Qld) <i>Chemical Usage Control Act</i> (Qld)



Management Action		Timing and Frequency	Responsible person(s)	Success criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
3. Priority weeds (other than prohibited or restricted matters) not previously recorded within the Project area; 4. Existing infestations of priority weeds (WoNS, restricted matters under the <i>Biosecurity Act 2014</i> [Qld] and priority weeds under the <i>Isaac Regional Council Biosecurity Plan 2024 – 2027</i>; listed in Table 4) impacting areas of high biodiversity value (including protected species or ecological communities listed under EPBC Act and/or NC Act); 5. Existing infestations of priority weeds (WoNS, restricted matters under the <i>Biosecurity Act 2014</i> [Qld] and priority weeds under the <i>Isaac Regional Council Biosecurity Plan 2024 – 2027</i>; listed in Table 4) impacting watercourses; 6. Existing infestations of priority weeds (WoNS, restricted matters under the <i>Biosecurity Act 2014</i> [Qld] and priority weeds under the <i>Isaac Regional Council Biosecurity Plan 2024 – 2027</i>; listed in Table 4) impacting along roads/access tracks; 7. Small, scattered existing infestations of priority weeds (WoNS, restricted matters under the <i>Biosecurity Act 2014</i> [Qld] and priority weeds under the <i>Isaac Regional Council Biosecurity Plan 2024 – 2027</i>; listed in Table 4) impacting; and 8. Other weed species. Additional considerations in developing the prioritisation schedule include safety, available resources, site accessibility, seasonal conditions, coordination with neighbouring weed management activities, and compliance with regulatory requirements.						
Weed control and treatment to be undertaken, appropriate to the species being treated. A species-specific weed control schedule is provided in Appendix E. Selected control methods and timing are primarily based on Queensland Government fact sheets, with supplementary guidance from the <i>Isaac Regional Council Biosecurity Plan 2024 – 2027</i>.	Chemical control A species-specific weed control schedule is outlined in Appendix E. The selected control methods and timing are mainly derived from the Queensland Government fact sheets with additions from the <i>Isaac Regional Council Biosecurity Plan 2024 – 2027</i>. Chemical control includes herbicide application. The <i>Australian Pesticides and Veterinary Medicines Authority</i> regulates herbicide use by registering specific products for particular target species and uses. All herbicide applications must comply with product label instructions and registered uses. In some circumstances, off-label applications may be permitted where undertaken in accordance with relevant permit conditions. Herbicides must be applied with care to minimise impacts on non-target species and the surrounding environment. For example, foliar spraying should not be undertaken during, or immediately prior to, heavy rainfall events due to the risk of chemical runoff. Any clearing of native vegetation required for weed control must be undertaken in accordance with the <i>Accepted Development Vegetation Clearing Code: Managing Weeds</i> (DoR, 2023) under the VM Act. Weed control activities near water sources present an elevated risk of environmental impacts, including increased erosion and likelihood of excessive runoff. Species-specific control methods that are outlined in Appendix E that are suitable for usage near water should be used in these areas. If methods are unsuitable or not specified for use near water, alternative approaches should be selected based on guidance chosen from Queensland Government fact sheets and/or best practice manuals.	Weed control frequency as provided in Appendix E.	Environmental Officer and suitably qualified contractor	• Success criteria include: • Control treatments are implemented in accordance • with the annual prioritisation schedule. • Weed control measures are undertaken in accordance with recommended guidance and best-practice principles. • Herbicide use complies with all applicable statutory requirements. • Weed outbreaks are contained and managed effectively in a timely manner.	• Monitoring requirements are provided in Appendix E. • All control treatments to be implemented in accordance with Appendix E and assessed for effectiveness. Where initial controls are ineffective, the cause to be identified and retreatment modified accordingly, with reference to the <i>Isaac Regional Council Biosecurity Plan 2024 – 2027</i>, Queensland Government fact sheets and relevant best-practice manuals. • The WPMP to be updated where novel control techniques or recommendations become available and are demonstrably more effective or more suitable than those set out in Appendix E. Any revised techniques to be implemented in accordance with all applicable guidelines. • Weed survey reports from the preceding year to be used to demonstrate implementation and effectiveness of weed management.	<i>Biosecurity Act 2014</i> (Qld) <i>Isaac Regional Council Biosecurity Plan 2024 – 2027</i>. VM Act



Management Action	Timing and Frequency	Responsible person(s)	Success criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
Physical control A species-specific weed control schedule is outlined in Appendix E. The selected control methods and timing are mainly derived from the Queensland Government fact sheets with additions from the <i>Isaac Regional Council Biosecurity Plan 2024 - 2027</i>. Physical control methods include manual removal, mechanical removal, cutting and mulching and burning. Physical control is generally applied where herbicide use is not preferred, where infestations are localised, or as part of an integrated weed management approach. For any controlled burning, the Bushfire Management Plan it to be consulted and complied with. This Plan incorporates all required permits and consultation requirements, which must be completed before burning commences. Any clearing of native vegetation required for weed control must be undertaken in accordance with the <i>Accepted Development Vegetation Clearing Code: Managing Weeds</i> (DoR, 2023) under the VM Act.	Weed control frequency as provided in Appendix E.	Environmental Officer and suitably qualified contractor	- Success criteria include: - Control treatments are implemented in accordance with the annual prioritisation schedule. - Weed control measures are undertaken in line with recommended guidance and best-practice principles. - Any clearing of native vegetation complies with relevant statutory requirements. - Controlled burns are undertaken in accordance with the approved Bushfire Management Plan. - Weed outbreaks are contained and managed effectively in a timely manner.	- Monitoring requirements are provided in Appendix E. Where a treatment recommended in Appendix E is unsuitable, an alternative approach to be selected with reference to the Queensland Government fact sheets and relevant best-practice manuals. - All control treatments to be monitored to assess effectiveness. Where initial treatment is ineffective, the underlying cause to be identified and follow-up actions modified accordingly with reference to the Queensland Government fact sheets and best-practice manuals. - The WPMP to be updated where novel techniques or recommendations become available and are demonstrated to be more effective or more suitable than those currently specified in Appendix E. - Weed survey reports from the preceding year to be used to demonstrate implementation and outcomes of weed management. - Inspection reports, field notes, reporting forms and photographic records to be retained as supporting evidence.	<i>Biosecurity Act 2014</i> (Qld) <i>Isaac Regional Council Biosecurity Plan 2024 - 2027</i>. VM Act
Biological control Biological control involves the use of approved living control agents, such as insects or pathogens, to reduce the vigour, reproductive output or abundance of target weed species. Biological control is generally used as part of an integrated management approach rather than as a standalone treatment Biological control agents exist in Queensland for several weed species present in the Isaac region. Strategic biocontrol as a suitable control treatment for the following species: <i>Opuntia</i> spp.* <i>Cryptostegia grandiflora</i>* <i>Harrisia martinii</i>* <i>Lantana camara</i>* <i>Vachellia nilotica</i>* <i>Parthenium hysterophorus</i>* These species have established biocontrol agents and do not require active reintroduction. However, for certain species (e.g. <i>Cryptostegia grandiflora</i>), biocontrol can reduce plant vigour and density but is typically insufficient as a standalone method. Accordingly, additional control measures should be implemented as part of an integrated management approach.	Ongoing / passive benefit from established agents; no active release proposed.	Environmental Officer and suitably qualified contractor	- Success criteria include: - Presence of established biocontrol agents noted where relevant; biological control considered as a supplementary component of integrated management.	- Monitoring requirements are provided in Appendix E. - Effectiveness to be noted opportunistically during weed monitoring; if biocontrol is absent or ineffective, alternative physical and/or chemical controls will remain the primary management response.	<i>Biosecurity Act 2014</i> (Qld).



6. PEST MANAGEMENT

Effective pest management requires a coordinated approach that combines prevention, monitoring, and control measures. The selection of appropriate control methods depends on the target species and site-specific factors, such as population density and behavioural characteristics. A summary of applicable prevention, monitoring, and control strategies is provided in Table 7, while Appendix F outlines species-specific management measures for priority pests recorded within the Project area.

Isolated, one-off control efforts are generally ineffective in managing pest animal populations, as many species can disperse quickly across large areas. Effective management therefore requires coordinated action at a regional scale, often led by NRM organisations working in collaboration with local clusters at finer spatial scales. The Fitzroy Basin Association is the local NRM body for the Project. Prior to conducting pest controls, Stanmore will identify if there is a local cluster of surrounding land managers and key stakeholders to coordinate timing and pest management activities with.



Table 7
Pest
management
actions

Management Action	Timing and Frequency	Responsible Person(s)	Success Criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
PREVENTION					
Appropriate storage of domestic waste Sanitation and hygiene measures are important in preventing the introduction and spread of pest animals. The Project area is to be maintained in a clean and orderly condition to discourage scavenging behaviour and reduce the likelihood of pest animal establishment. Waste to be stored in appropriate containers fitted with fauna-proof lids, and disposal areas to be securely fenced. All waste management practices to be undertaken in accordance with the Project's non-mining waste management procedures.	Year-round	All site personnel	- Success criteria includes: - Waste management is implemented in accordance with the non-mining waste management procedures.	Monitoring, reporting and adaptive management to be undertaken in accordance with the requirements of the non-mining waste management procedures.	<i>Biosecurity Act 2014</i> (Qld). EP Act and relevant EA conditions
Minimise human-animal interaction (e.g., feeding) on site All site personnel are to avoid deliberate feeding of wildlife or pest animals and avoid behaviours that may attract animals to work areas, accommodation areas, waste storage areas or laydown areas.	Year-round	All site personnel	- Success criteria includes: - Unnecessary human-animal interactions are avoided.	Any incidents to be captured through the health, safety and environment reporting process.	<i>Biosecurity Act 2014</i> (Qld).
MONITORING					
Annual monitoring Annual monitoring of the Project area to be undertaken to detect changes in pest animal populations over time, assess whether population densities remain within acceptable limits and, where feasible, estimate abundance.	March–May Annually	Environmental Officer and suitably qualified contractor	- Success criteria includes: - Monitoring activities are completed. - New pest incursions are detected. - New pest incursions are reported where required. - Population density estimates are provided where feasible.	Where monitoring frequency is considered insufficient, the reasons to be documented and the timing of subsequent monitoring events reviewed and adjusted as necessary. Results of monitoring to be recorded and incorporated into reporting.	<i>Biosecurity Act 2014</i> (Qld).



Management Action	Timing and Frequency	Responsible Person(s)	Success Criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
Post-control monitoring Sites to be inspected following control activities to assess the effectiveness of measures implemented. Inspections will review the control methods applied, determine whether follow-up actions are required and, where feasible, provide estimates of population density.	No sooner than four weeks after the initial control event, to allow changes in pest activity and population density to be detected. Repeated following implementation of controls.	Environmental Officer and suitably qualified contractor	- Success criteria includes: - Monitoring activities are completed and records maintained. - The effectiveness of control measures is assessed. - Population density estimates are provided where feasible.	Annual pest management reports from the preceding year to be used to evaluate changes in pest animal activity and the effectiveness of control measures. If monitoring frequency is considered insufficient, the reasons to be documented and the timing of future monitoring events adjusted accordingly.	<i>Biosecurity Act 2014 (Qld).</i>
CONTROLS					
Prepare and implement an annual prioritisation schedule for pest animal management The prioritisation schedule will identify priority pest species, management areas and recommended control methods for the annual control program. Priorities to be informed by the results of monitoring, seasonal and environmental conditions, known pest activity, risk to environmental and operational values, and the outcomes of control measures implemented in the preceding year. The annual prioritisation schedule to be developed for the Project area. Treatment priorities to be informed by the management stages of priority weeds identified within the Project area and surrounds. This to be based on previous and current monitoring results as well as incidental observations. The following hierarchy to be applied to assess treatment priorities: 1. Prohibited or restricted matters under the <i>Biosecurity Act 2014 (Qld)</i> not previously recorded within the Project area or surrounds;	Prepared annually, prior to commencement of the annual pest control program. Reviewed and updated as required following monitoring results, incidental observations or significant changes in pest activity.	Environmental Officer and suitably qualified contractor	Success criteria includes: - Annual prioritisation schedule completed prior to implementation of controls. - Priority pest species and management areas identified and mapped. - Selected control methods are consistent with pest risk, site conditions and best practice guidance. - Pest management actions are implemented in accordance with the prioritisation schedule.	The prioritisation schedule to be reviewed annually using monitoring results, pest activity records, incidental observations and outcomes of previous control measures. Where monitoring indicates that priorities have changed, or that selected controls are ineffective, the schedule to be updated accordingly. Changes to pest priorities, control areas and selected management methods to be documented in annual pest management reporting.	<i>Biosecurity Act 2014 (Qld).</i>



Management Action	Timing and Frequency	Responsible Person(s)	Success Criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
2. Priority pests (other than prohibited or restricted matters) under the <i>Isaac Regional Council Biosecurity Plan 2024 – 2027</i> not previously recorded in the Project area or surrounds; 3. Priority pests with unacceptable levels of abundance causing substantial impacts within the Project area or surrounds, including to protected species or ecological communities listed under EPBC Act and/or NC Act; and 4. Other pest species. Additional factors such as safety, resourcing, access constraints, breeding seasons, seasonal variations, alignment with neighbouring pest management activities and regulatory requirements to be considered when creating the prioritisation schedule.					
Pest control and treatment to be undertaken, appropriate to the species being controlled. A species-specific pest control schedule is provided in Appendix F. Selected control methods and timing are primarily Baiting Stanmore will, where practicable, participate in local 1080 bait supply campaigns coordinated by Isaac Regional Council for management of Wild Dogs and Feral Pigs. Requirements and conditions of participation are provided by Council and must be complied with when participating in the 1080 baiting program. Manufactured 1080 baits may also be sourced through Biosecurity Queensland or Council for use outside formal baiting campaigns. Any personnel or contractors handling or collecting 1080	Control methods implemented as outlined in Appendix F.	Environmental Officer and suitably qualified contractor	• Success criteria includes: • Control treatments are implemented in accordance with the annual prioritisation schedule. • Pest animal control measures comply with relevant Codes of Practice and National Standard Operating Procedures. • 1080 baiting is undertaken in accordance with statutory requirements. • Pest animal outbreaks are contained and	• Monitoring requirements are provided in Appendix F. • All implemented control measures to be assessed for effectiveness. Where initial controls are not effective, the cause to be identified and follow-up actions adjusted accordingly in consultation with surrounding landholders and with reference to Department of Agriculture and Fisheries fact sheets and relevant best-practice guidance. Indicators and methods for follow-up treatment are provided in Appendix F. • The WPMP to be revised where new control techniques become available and are demonstrated to be more effective or more suitable than those currently identified in	<i>Biosecurity Act 2014</i> (Qld). <i>Animal Care and Protection Act</i> (Qld) MPA <i>Queensland Invasive Plants and Animals Strategy 2025–2030</i> (DPI 2024; Qld) CoPs NATSOPs



Management Action	Timing and Frequency	Responsible Person(s)	Success Criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
based on Queensland Government fact sheets. baits for use within the Project area must hold the required chemical product training and be approved users. Signage for 1080 baiting to be installed in relevant management areas within the Project area. Storage, handling, use and disposal of chemicals and baited meat must comply with all applicable regulatory requirements, including manufacturer instructions, relevant Standard Operating Procedures for 1080 baiting and the <i>Animal Care and Protection Act 2001</i> (Qld). Measures to minimise risks to non-target native species to be implemented during baiting programs, including careful selection of bait type and method of distribution.			managed effectively and in a timely manner.	Appendix F. Any new techniques to be implemented in accordance with applicable guidelines. Annual pest management reporting from the preceding year to be used to compare pest animal activity and inform evaluation of control effectiveness.	
Trapping Trapping involves live capture followed by humane euthanasia. Euthanasia must result in rapid loss of consciousness followed by death without evidence of pain or distress. Appropriate euthanasia techniques are described in the Standard Operating Procedures for the relevant species and must be undertaken in accordance with the <i>Animal Care and Protection Act 2001</i>. The animal must be	Control methods implemented as outlined in Appendix F.	Environmental Officer and suitably qualified contractor	- Success criteria includes: - Control treatments are implemented in accordance with the annual prioritisation schedule. - Pest animal control measures comply with relevant Codes of Practice and National Standard Operating Procedures. - Pest animal outbreaks are contained and	- Monitoring requirements are provided in Appendix F. - All implemented control measures to be assessed for effectiveness. Where initial controls are not effective, the cause to be identified and follow-up actions adjusted accordingly in consultation with surrounding landholders and with reference to DAF fact sheets and relevant best-practice guidance. Indicators and methods for follow-up treatment are provided in Appendix F.	<i>Biosecurity Act 2014</i> (Qld). <i>Animal Care and Protection Act</i> (Qld) <i>Queensland Invasive Plants and Animals Strategy 2025–2030</i> (DPI 2024; Qld) CoPs NATSOPs



Management Action	Timing and Frequency	Responsible Person(s)	Success Criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
confirmed dead before the site is left. A range of trapping methods may be used depending on the target species. Traps will, wherever practicable, be species-specific to minimise impacts on non-target fauna. Traps must be monitored in accordance with relevant legislation and best-practice guidance.			managed effectively and in a timely manner.	- The WPMP to be revised where new control techniques become available and are demonstrated to be more effective or more suitable than those currently identified in Appendix F. Any new techniques to be implemented in accordance with applicable guidelines. - Records of trapping outcomes to be retained by the Site Environmental Team	
Shooting Shooting of pest animals must be undertaken by a suitably qualified and authorised person holding the appropriate firearms licence. Appropriate shooting techniques are described in the Standard Operating Procedures for the relevant species. Shooting should result in immediate death, and death must be confirmed before the site is left. Any pest animal shooting undertaken within the Project area must comply with the requirements of the <i>Weapons Act</i> (Qld) and the <i>Animal Care and Protection Act 2001</i> (Qld).	Control methods implemented as outlined in Appendix F.	Environmental Officer and suitably qualified contractor	- Success criteria includes: - Control treatments are implemented in accordance with the annual prioritisation schedule. - Pest animal control measures comply with relevant Codes of Practice and National Standard Operating Procedures. - Pest animal control measures are undertaken in accordance with relevant guidance and best-practice principles. - Shooting is conducted in accordance with statutory requirements. - Pest animal outbreaks are contained and managed effectively and in a timely manner.	- Monitoring requirements are provided in Appendix F. - All implemented control measures to be assessed for effectiveness. Where initial controls are not effective, the cause to be identified and follow-up actions adjusted accordingly in consultation with surrounding landholders and with reference to DAF fact sheets and relevant best-practice guidance. Indicators and methods for follow-up treatment are provided in Appendix F. - The WPMP to be revised where new control techniques become available and are demonstrated to be more effective or more suitable than those currently identified in Appendix F. Any new techniques to be implemented in accordance with applicable guidelines. - Records of shooting outcomes to be retained by the Site Environmental Team.	<i>Biosecurity Act 2014</i> (Qld). <i>Animal Care and Protection Act</i> (Qld) <i>Queensland Invasive Plants and Animals Strategy 2025–2030</i> (DPI 2024; Qld) CoPs NATSOPs



Management Action	Timing and Frequency	Responsible Person(s)	Success Criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
Biological control The biological control agent rabbit haemorrhagic disease virus (RHDV) is available in Australia for management of the European Rabbit. No biological control agents are currently available for the other priority pest animal species recorded within the Project area.	Control methods implemented as outlined in Appendix F.	Environmental Officer and suitably qualified contractor	- Success criteria includes: - Control treatments are implemented in accordance with the annual prioritisation schedule. - Pest animal control measures comply with relevant CoPs and NATSOPs - Pest animal outbreaks are contained and managed effectively and in a timely manner.	- Monitoring requirements are provided in Appendix F. - All implemented control measures to be assessed for effectiveness. Where initial controls are not effective, the cause to be identified and follow-up actions adjusted accordingly in consultation with surrounding landholders and with reference to the <i>Isaac Regional Council Biosecurity Plan 2024 - 2027</i>, DAF fact sheets and relevant best-practice guidance. Indicators and methods for follow-up treatment are provided in Appendix F. - The WPMP to be revised where new control techniques become available and are demonstrated to be more effective or more suitable than those currently identified in Appendix F. Any new techniques to be implemented in accordance with applicable guidelines. - Any evidence of biological control activity to be recorded and retained by the Site Environmental Team.	<i>Biosecurity Act 2014</i> (Qld). <i>Animal Care and Protection Act</i> (Qld) <i>Queensland Invasive Plants and Animals Strategy 2025–2030</i> (DPI 2024; Qld) CoPs NATSOPs
Habitat manipulation A range of habitat manipulation measures may be used to manage pest animals within the Project area, as described in Appendix F. Where appropriate, removal of surface harbour such as log piles, old machinery, and dense weed or grass growth may be	Control methods implemented as outlined in Appendix F.	Environmental Officer and suitably qualified contractor	- Success criteria includes: - Weed management is completed where required to support habitat manipulation. - Warren ripping is implemented in accordance with the annual prioritisation schedule.	- Monitoring requirements are provided in Appendix F. - All implemented control measures to be assessed for effectiveness. Where initial controls are not effective, the cause to be identified and follow-up actions adjusted accordingly in consultation with surrounding landholders and with reference to DAF fact sheets and relevant best-practice guidance.	<i>Biosecurity Act 2014</i> (Qld). <i>Animal Care and Protection Act</i> (Qld) <i>Queensland Invasive Plants and Animals Strategy 2025–</i>



Management Action	Timing and Frequency	Responsible Person(s)	Success Criteria	Monitoring, reporting and adaptive management	Relevant Statutory Reference
undertaken to reduce above-ground breeding habitat for the European Rabbit and shelter opportunities for the House Mouse. Warren ripping may also be undertaken, where rabbit warrens are identified, as part of an integrated management program for the European Rabbit. This measure must be implemented in accordance with relevant Standard Operating Procedures and the Animal Care and Protection Act 2001.			Warren ripping is undertaken in accordance with relevant COPs and NATSOPs.	Indicators and methods for follow-up treatment are provided in Appendix F. - The WPMP to be revised where new control techniques become available and are demonstrated to be more effective or more suitable than those currently identified in Appendix F. Any new techniques to be implemented in accordance with applicable guidelines. - Records of weed treatment, habitat manipulation and warren ripping to be retained by the Site Environmental Team.	2030 (DPI 2024; Qld) CoPs NATSOPs



6.1 GENERAL PROVISIONS

6.1.1 Awareness and Education

All personnel and contractors are to complete a site-specific induction upon commencing work at the site. The induction will include an overview of the WPMP applicable to the Project area, including the requirement for all personnel to comply with the GBO under the *Biosecurity Act 2014* (Qld), procedures for reporting incidental weed and pest sightings within the Project area, applicable waste management and vehicle wash-down procedures for the Project and details of current exclusion zones and associated procedures.

Relevant materials to be made available to relevant suitably qualified personnel enacting management actions under the WPMP, including:

1. The WPMP and current annual prioritisation schedules;
2. Current weed and pest identification materials developed by DAF, together with any other suitable guidance relevant to species that occur within the Project area;
3. Procedures for reporting incidental weed and pest sightings within the Project area;
4. Applicable waste management and vehicle wash-down procedures for the Project; and
5. Details of current exclusion zones and associated procedures.

Role-specific training to be provided where required to ensure personnel are appropriately trained for their responsibilities under the WPMP. Where nationally recognised training or accreditation is required for a particular role, evidence of completion to be confirmed prior to commencement of the relevant task.

6.1.2 Records and Reporting

Records of all weed and pest sightings within the Project area to be maintained in a database and updated following monitoring surveys and incidental observations.

Details of all weed and pest management measures implemented within the Project area will also be recorded in a management database. At a minimum, the following information is to be documented for each treatment event:

- Date;
- Location of treatment activity;
- Target species;
- Treatment type;
- Quantity of treatment applied (e.g. bait or herbicide); and
- Area treated

To inform future management actions and assess management effectiveness, monitoring and management activities to be subject to detailed reporting. Recommended reporting deliverables under the WPMP include the following:

- An annual prioritisation schedule for weed management, prepared prior to implementation of management actions, as outlined in Table 6.
- An annual prioritisation schedule for pest management, prepared prior to implementation of management actions, as outlined in Table 7.
- An annual Weed Monitoring Report, documenting the findings of monitoring surveys, including records of novel weed species, changes in population density of existing species, the effectiveness of



management measures implemented during the preceding reporting period, and recommendations for future management actions;

- An annual Pest Monitoring Report, documenting the findings of monitoring surveys, trapping or shooting activities undertaken, changes in population density of existing pest species, the effectiveness of management measures implemented during the preceding reporting period, and recommendations for future management actions;

All reports prepared as part of weed and pest management to be retained for the life of the Project. Additional records will also be maintained, including weed and seed declaration forms, biosecurity certificates and wash-down certificates.

6.1.3 Evaluation and Review

Implementation and effectiveness of the WPMP, and the management measures it contains, to be reviewed regularly to ensure that:

- Stanmore is complying with applicable legal obligations;
- The overall management strategy remains current and fit for purpose; and
- The WPMP and associated management measures are adequately managing weed and pest impacts within the Project area.

The WPMP to be formally reviewed every three years. Additional reviews to be undertaken as required, particularly where:

- The WPMP is not effectively managing weed and pest impacts within the Project area;
- Legislative requirements change;
- Project activity areas change; or
- New national, State or local government procedures or guidance relevant to weed and pest management become available.

The WPMP to be amended, where necessary, to address the outcomes of any review. All amendments to be documented in the version history at the end of this document, and any relevant changes to be communicated to stakeholders and site personnel.



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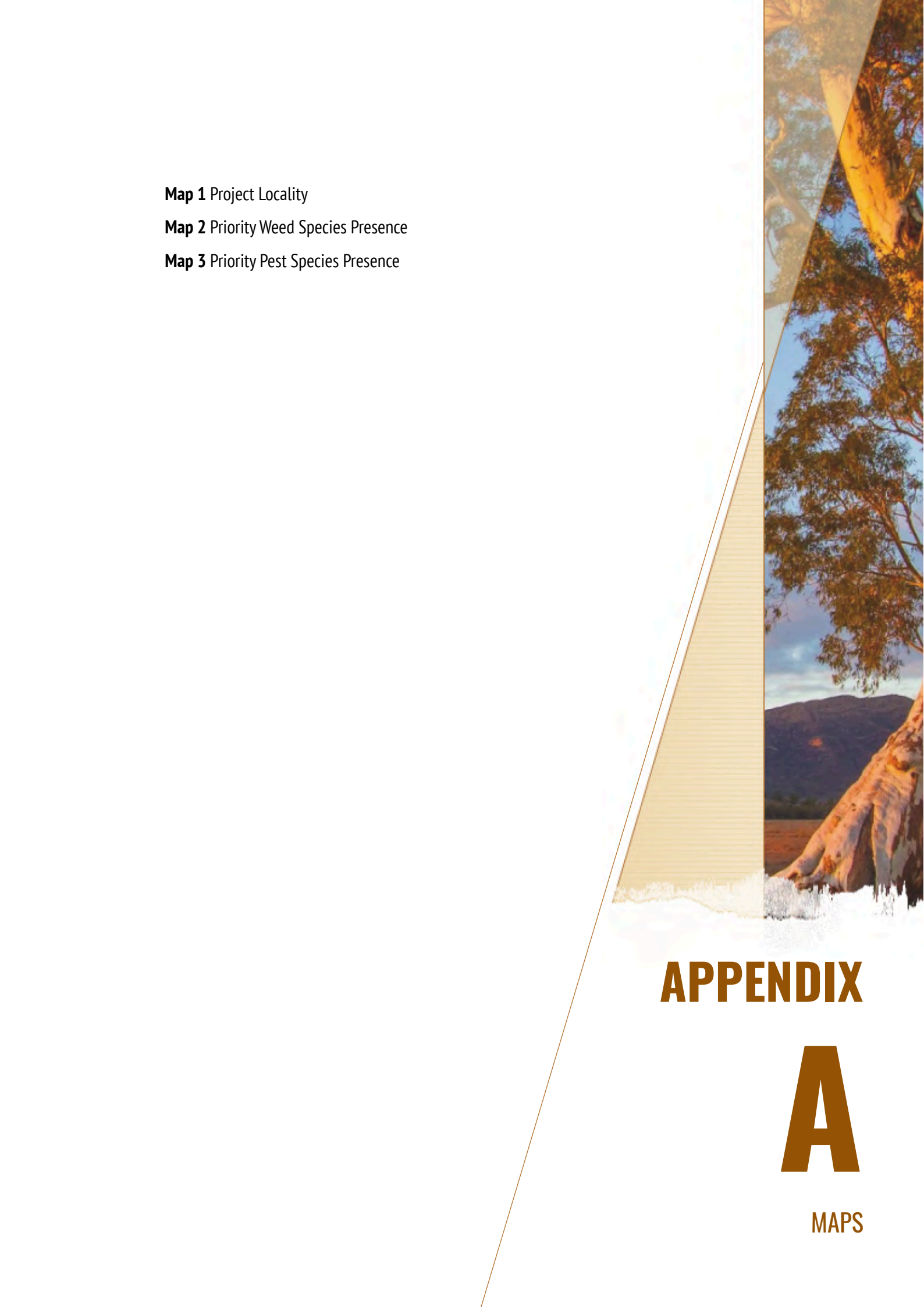
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Map 1 Project Locality

Map 2 Priority Weed Species Presence

Map 3 Priority Pest Species Presence



APPENDIX

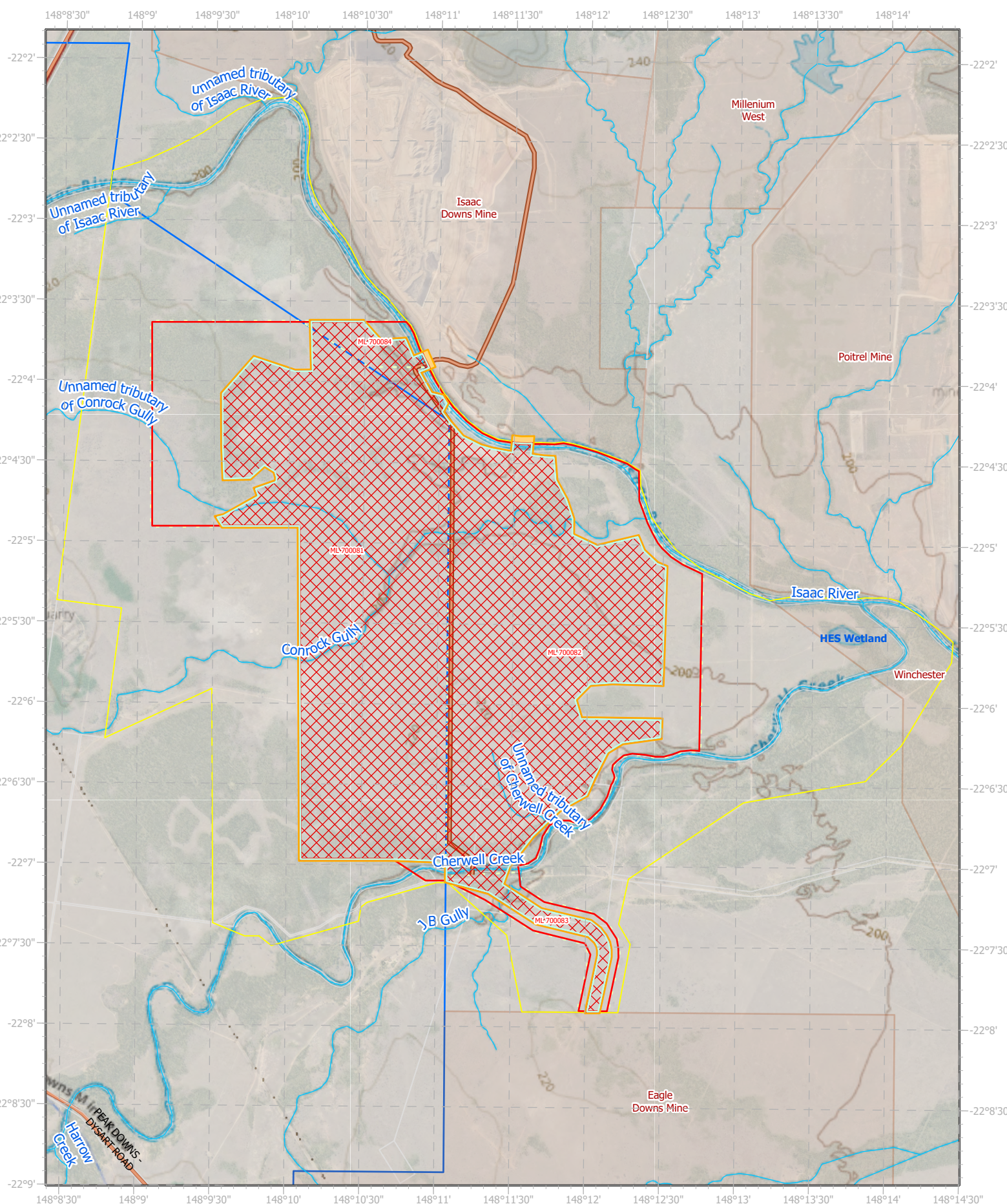
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MAPS



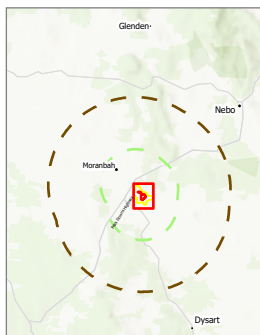
MAP 1

Project Locality



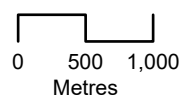
Legend

- | | |
|---------------------------------|-----------------------|
| Project area | Land parcel |
| Survey area | MDL permit granted |
| Disturbance area on Project MLs | ML permit granted |
| Additional disturbance area | ML access application |
| EPBC impact area | ML permit application |
| EIS Impact area | Watercourses |
| Area of interest | State controlled road |
| Region | |



Isaac Downs Extension Weed and Pest Management Plan

Map 1 - Project Locality



Scale: 1:56,000
Coordinate System: GDA2020 MGA Zone 55
Prepared: MG Checked: EK Approved: EK
Date: 28 Feb 2026

Trend Environmental Consultants

© EMILY KRUNES PTY LTD (trading as Trend Environmental) ABN 43 622 414 046
94 Kennedy Esplanade South Mission Beach, QLD 4852

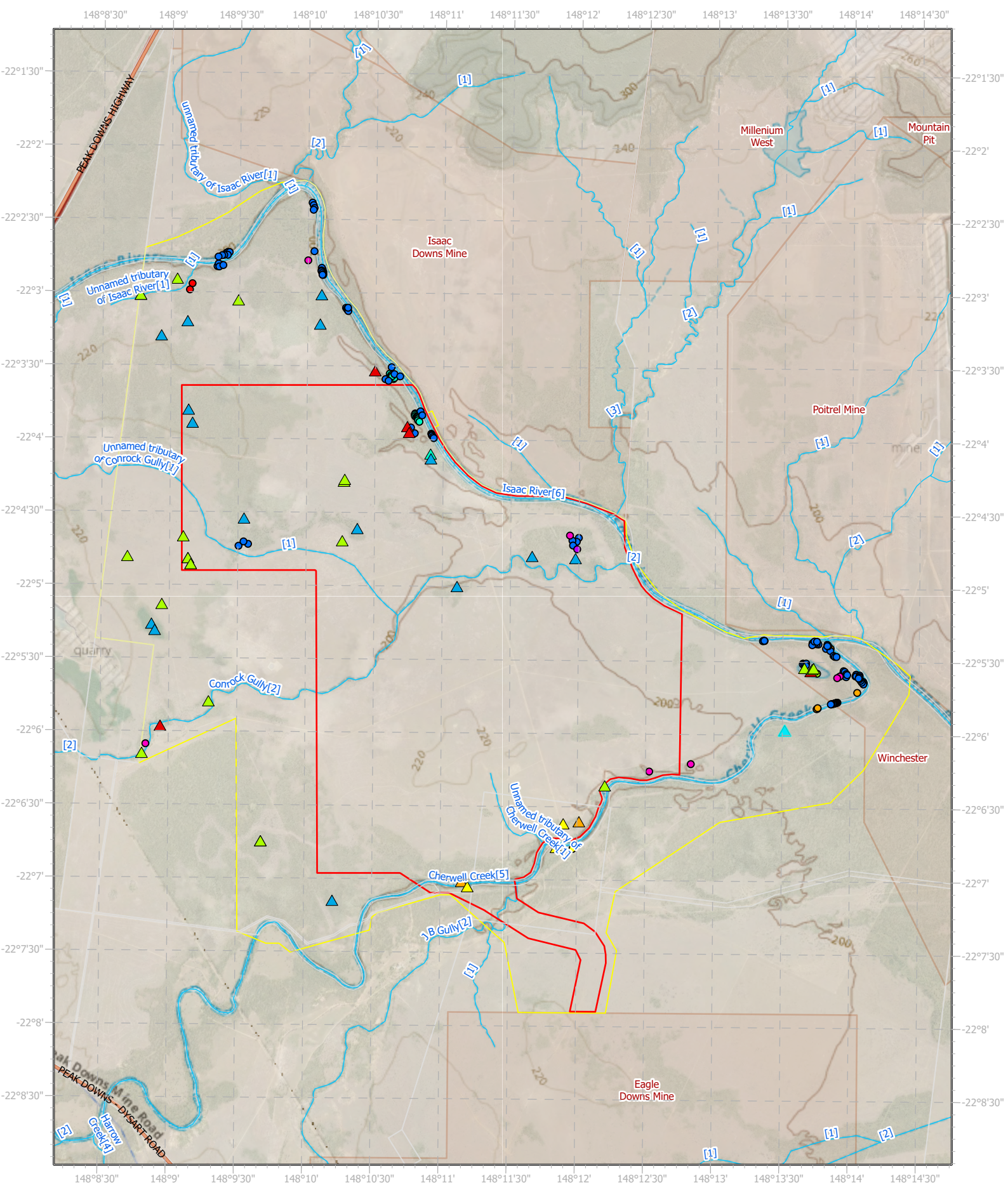
Data Source: Trend - Ecological Data, Qspatial - ML surface granted, SMC - Max Disturbance, Proposed MLA

Imagery Service Layer Credits: Vantor, Includes material © State of Queensland (Department of Resources); © Planet Labs Netherlands B.V. reproduced under licence from Planet and Geoplex, all rights reserved, 2025. © State of Queensland (Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development) 2025, Department of Resources, DESI, Esri, TomTom, Garmin, FAO, NOAA, USGS, Path: C:\Users\mkg95\OneDrive\Documents\Current work\Isaac Downs Extension\Workspace\Baseline - Project Locality Map 1.aprx



MAP 2

Priority Weed Species Presence

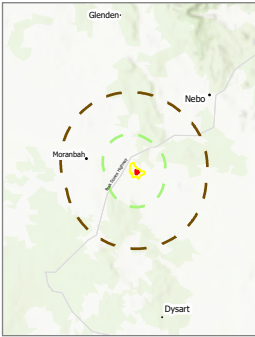


Legend

- Project area
- Survey area
- ML permit granted
- Watercourses

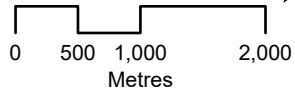
Priority Weed Species Observations

- Bryophyllum daigremontianum* (Mother of Millions)
- Cryptostegia grandiflora* (Rubber Vine)
- Harrisia martinii* (Harrisia Cactus)
- Hymenachne amplexicaulis* (Hymenachne)
- Jatropha gossypifolia* (Bellyache Bush)
- Lantana camara* (Lantana)
- Lantana montevidensis* (Creeping Lantana)
- Leucaena leucocephala* (Leucaena)
- Neptunia oleracea* (Water Mimosa)
- Opuntia stricta* (Velvety Prickly Pear)
- Opuntia tomentosa* (Prickly Pear)
- Parthenium hysterophorus* (Parthenium)
- Vachellia farnesiana* (Prickly Acacia)
- Vachellia nilotica* (Mimosa Bush)



Isaac Downs Extension Weed and Pest Management Plan

Map 2- Priority Weed Species Observations



Scale: 1:60,496
Coordinate System: GDA2020 MGA Zone 55
Prepared: MG Checked: EK Approved: EK
Date: 07 May 2026

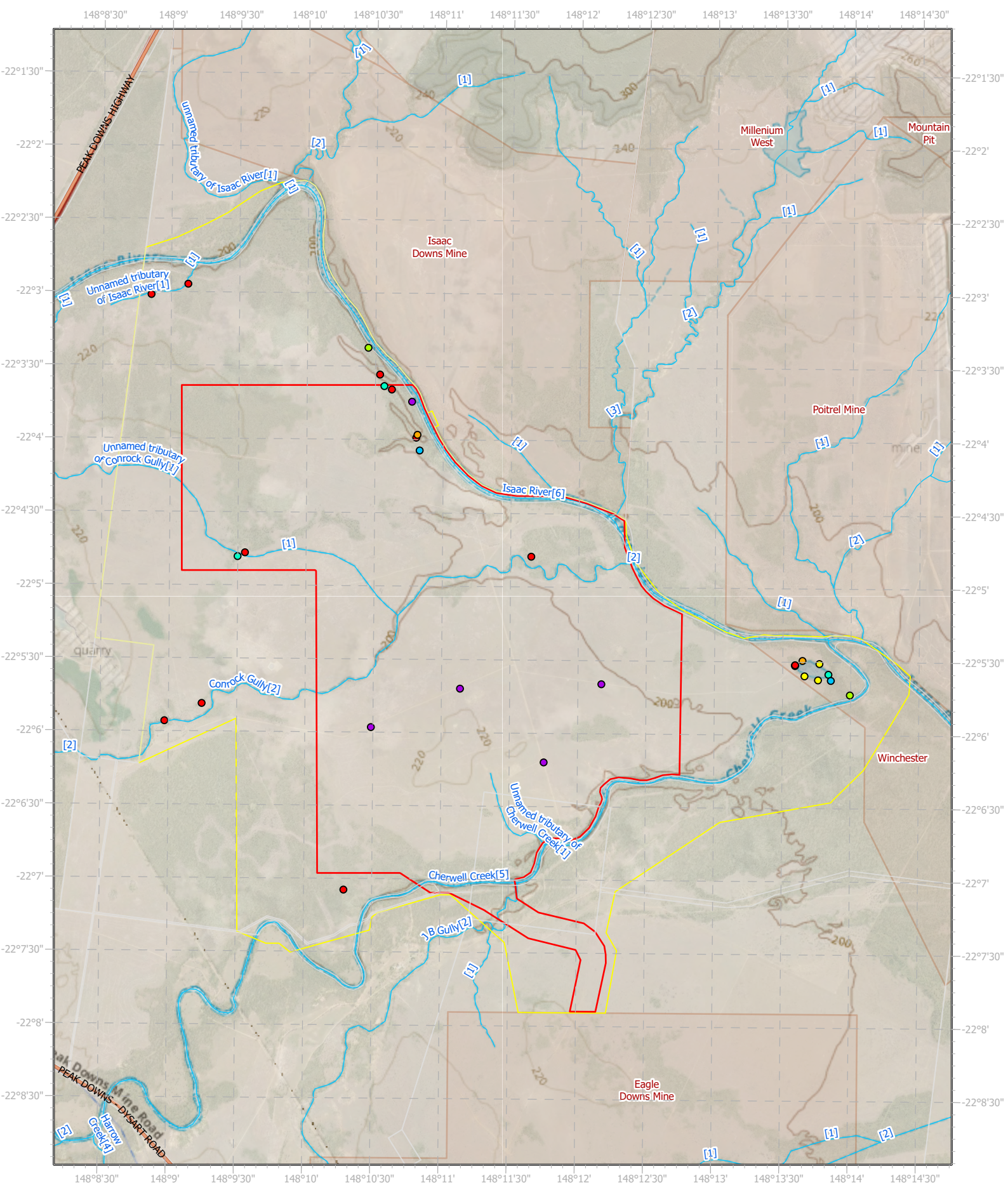


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94 Kennedy Esplanade South Mission Beach, QLD 4852
Data Source: Trend - Ecological Data, Qspatial - ML surface granted, SMC - Max Disturbance, Proposed MLA
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Path: C:\Users\mkg95\OneDrive - Trend Environmental\Shared Documents - Ecology\General\Clients\10 Stanmore\10-12 Isaac Downs Extension\10-12-6 EIS\10-12-6-2 EIS Management Plans\GIS\Workspace\Map 2 - Weed Observations.aprx



MAP 3

Priority Pest Species Presence



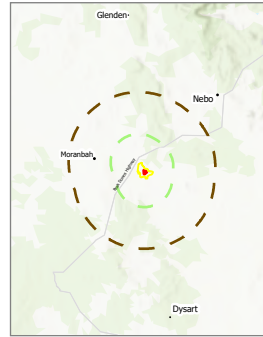
Legend

- Project area
- Survey area
- ML permit granted
- Watercourses

Pest Animal Species Observations

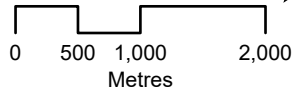
- Cane Toad (*Rhinella Marina*)

- Feral Cat (*Felis catus*)
- Wild Dog (*Canis familiaris*)
- Feral Red Deer (*Cervus elaphus*)
- Wild Pig (*Sus scrofa*)
- Fox (*Vulpus vulpus*)
- European Rabbit (*Oryctolatus cuniculus*)



**Isaac Downs Extension
Weed and Pest Management
Plan**

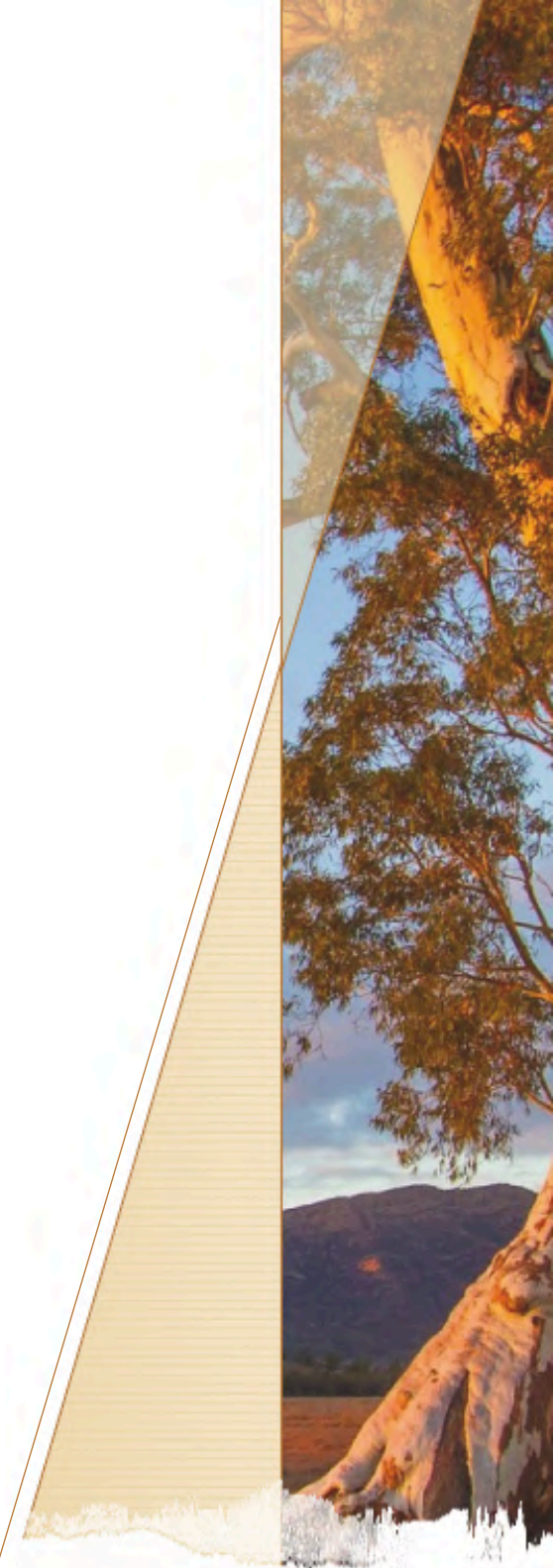
**Map 3- Pest Animal Species
Observations**



Scale: 1:60,496
Coordinate System: GDA2020 MGA Zone 55
Prepared: MG Checked: EK Approved: EK
Date: 07 May 2026



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94 Kennedy Esplanade South Mission Beach, QLD 4852
Data Source: Trend - Ecological Data, Qspatial - ML surface granted, SMC - Max Disturbance, Proposed MLA
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Path: C:\Users\mkg95\OneDrive - Trend Environmental\Shared Documents - Ecology\General\Clients\10 Stanmore\10-12 Isaac Downs Extension\10-12-6 EIS\10-12-6-2 EIS Management Plans\GIS\Workspace\Map 3 - Pest Species Observations.aprx



APPENDIX

B

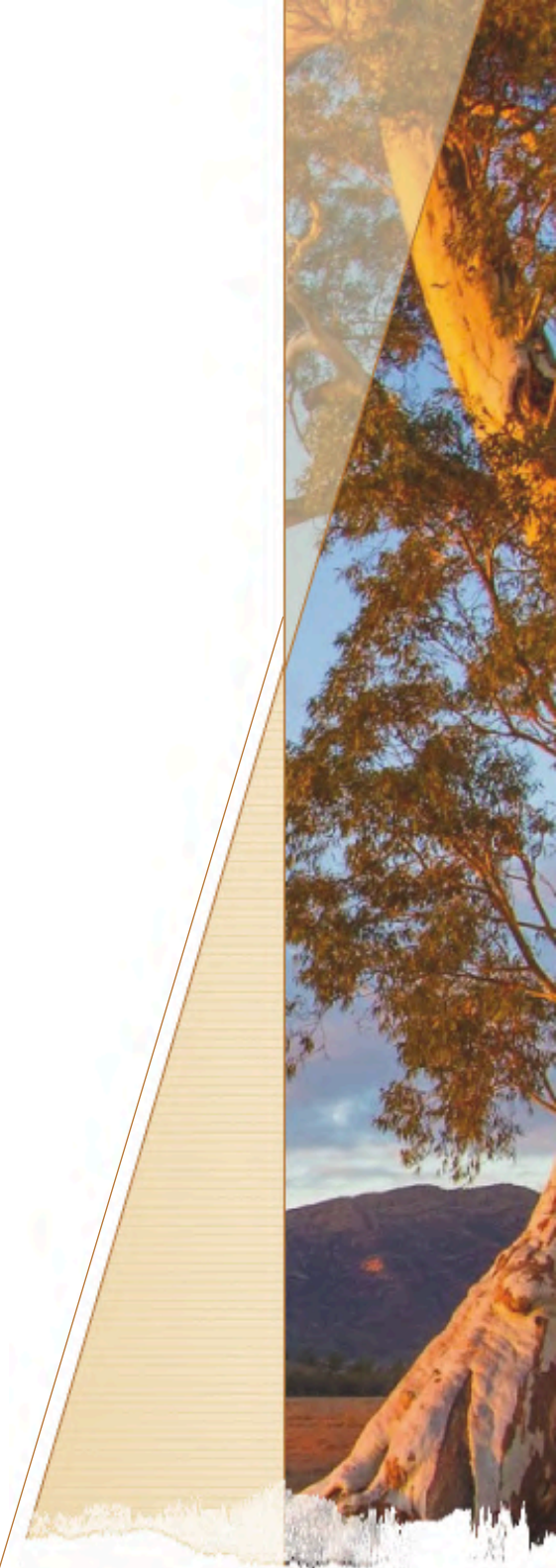
**ISAAC REGIONAL COUNCIL
INVASIVE SPECIES PRIORITY LIST**



Table 8
Isaac Regional
Council invasive
species priority
list and their
corresponding
management
phase

Species	Feasibility of Control (FoC) category	Risk Category (R)	Management Phase (FoC × R)
WEEDS			
<i>Parthenium hysterophorus</i> (Parthenium)*	Negligible	Very high	Asset-based protection
<i>Parkinsonia aculeata</i> (Parkinsonia) *	Negligible	Very high	Asset-based protection
<i>Vachellia nilotica</i> (Prickly Acacia) *	Negligible	Very high	Asset-based protection
<i>Ricinus communis</i> (Castor Oil Plant) *	Negligible	Very high	Asset-based protection
<i>Vachellia farnesiana</i> (Mimosa Bush) *	Negligible	Very high	Asset-based protection
<i>Salvinia molesta</i> (Salvinia) *	Negligible	Very high	Asset-based protection
<i>Ziziphus mauritiana</i> (Chinee Apple)*	Low	Very high	Asset-based protection
<i>Sporobolus fertilis</i> , <i>S. jacquemontii</i> , <i>S. natalensis</i> , <i>S. pyramidalis</i> (Rat's Tail Grass)*	Negligible	Very high	Asset-based protection
<i>Hymenachne amplexicaulis</i> (Hymenachne) *	Negligible	Very high	Asset-based protection
<i>Bryophyllum delagoense</i> (Mother-of-millions) *	Negligible	Very high	Asset-based protection
<i>Lantana</i> spp. (Lantana) *	Negligible	Very high	Asset-based protection
<i>Jatropha gossipifolia</i> (Bellyache Bush) *	Negligible	Very high	Asset-based protection
<i>Leucaena leucocephala</i> (Feral Leucaena) *	Negligible	Very high	Asset-based protection
<i>Pistia stratiotes</i> (Water Lettuce) *	Negligible	High	Asset-based protection
<i>Harrisia martinii</i> , <i>H. tortuosa</i> , and <i>H. pomanensis</i> syn. <i>Cereus pomanensis</i> (Harrisia Cactus) *	Negligible	High	Asset-based protection
<i>Cryptostegia grandiflora</i> (Rubber Vine) *	Negligible	High	Asset-based protection
<i>Schinus terebinthifolius</i> (Broadleaved Pepper Tree) *	Very high	Medium	Control
<i>Austrocyllindropuntia</i> spp., <i>Cylindropuntia</i> spp. and <i>Opuntia</i> spp. (Opuntoid Cacti) *	Medium	Medium	Asset-based protection
<i>Cascabela thevetia</i> (Captain Cook Tree) *	Medium	Medium	Asset-based protection
<i>Tamarix aphylla</i> (Athel Pine) *	Very high	Negligible	Prevention
PESTS			
Dog (<i>Canis familiaris</i>)*	Negligible	Very high	Asset-based protection
Feral Cat (<i>Felis catus</i>)*	Negligible	Very high	Asset-based protection
Feral Deer (<i>Dama dama</i> , <i>Axis axis</i> , <i>Cervus elaphus</i> and <i>Cervus timorensis</i>)*	Negligible	High	Asset-based protection
Feral Pig (<i>Sus scrofa</i>)*	Negligible	Very high	Asset-based protection

(Isaac Region 2024, pp. 65–67)



APPENDIX

C

PROJECT AREA WEED SPECIES LIST

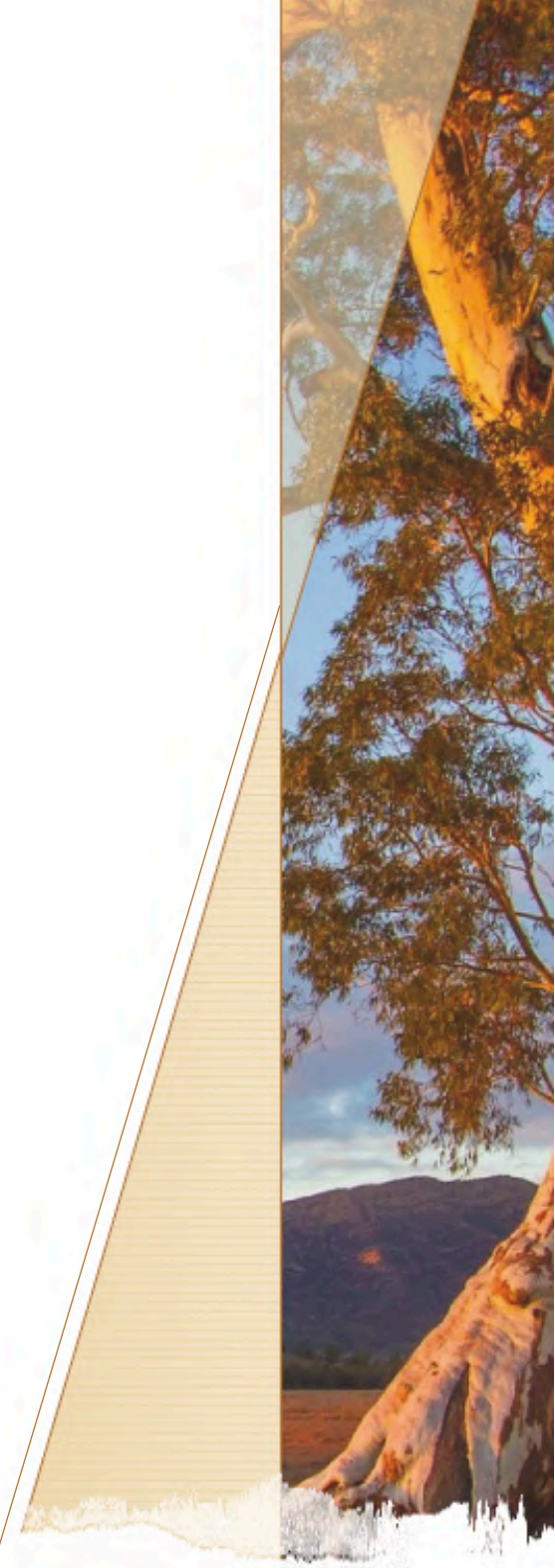


Table 9
Weed
species
recorded to
date within
the Project
area

Family	Scientific Name	Common Name	Status		<i>Isaac Regional Council Biosecurity Plan 2024 - 2027</i>
			WoNS	<i>Biosecurity Act 2014 (Qld)</i>	
Apocynaceae	<i>Cryptostegia grandiflora</i> *	Rubber Vine	Yes	Restricted Category 3	Yes
Asteraceae	<i>Bidens bipinnata</i> *	Beggars Ticks	-	-	-
Asteraceae	<i>Verbesina enceliodes</i> *	Crownbeard	-	-	-
Asteraceae	<i>Parthenium hysterophorus</i> *	Parthenium Weed	Yes	Restricted Category 3	Yes
Cactaceae	<i>Harrisia martinii</i> *	Harissia Cactus	-	Restricted Category 3	Yes
Cactaceae	<i>Opuntia stricta</i> *	Prickly Pear	Yes	Restricted Category 3	Yes
Cactaceae	<i>Opuntia tomentosa</i> *	Velvety Prickly Pear	Yes	Restricted Category 3	Yes
Commelinaceae	<i>Commelina benghalensis</i> *	Indian Dayflower	-	-	-
Crassulaceae	<i>Bryophyllum daigremontianum</i> *	Mother of Millions	-	Restricted Category 3	Yes
Cucurbitaceae	<i>Citrullus colocynthis</i> *	-	-	-	-
Cucurbitaceae	<i>Citrullus lanatus</i> *	Pie Melon	-	-	-
Cucurbitaceae	<i>Cucumis anguria</i> *	Burr Gherkin	-	-	-
Euphorbiaceae	<i>Jatropha gossypifolia</i> *	Bellyache Bush	Yes	Restricted Category 3	Yes
Fabaceae	<i>Leucaena leucocephala</i> *	Leucaena	-	-	Yes
Fabaceae	<i>Vachellia farnesiana</i> *	Mimosa Bush	-	-	Yes
Fabaceae	<i>Vachellia nilotica</i> *	Prickly Acacia	Yes	Restricted Category 3	Yes
Leguminosae	<i>Crotalaria pallida</i> *	Streaked Rattlepod	-	-	-
Leguminosae	<i>Macroptilium atropurpureum</i> *	Siratro	-	-	-
Leguminosae	<i>Neptunia oleracea</i> *	Water Mimosa	-	Restricted Category 2, 3, 4, 5	-
Malvaceae	<i>Sida cordifolia</i> *	Flannel Weed	-	-	-
Malvaceae	<i>Malvastrum americanum</i> *	Spiked Malvastrum	-	-	-
Oxalidaceae	<i>Oxalis corniculata</i> *	Creeping Oxalis	-	-	-
Oxalidaceae	<i>Oxalis pres-caprae</i> *	Soursob	-	-	-
Papaveraceae	<i>Argemone ochroleuca</i> *	Mexican Poppy	-	-	-
Passifloraceae	<i>Passiflora suberosa</i> *	Corky Passionflower	-	-	-
Phyllanthaceae	<i>Phyllanthus amarus</i> *	-	-	-	-



Family	Scientific Name	Common Name	Status		
			WoNS	Biosecurity Act 2014 (Qld)	Isaac Regional Council Biosecurity Plan 2024 - 2027
Poaceae	<i>Bothriochloa pertusa</i> *	Indian Bluegrass	-	-	-
Poaceae	<i>Cenchrus ciliaris</i> *	Buffel Grass	-	-	-
Poaceae	<i>Dichanthium aristatum</i> *	Angleton Grass	-	-	-
Poaceae	<i>Hymenachne amplexicaulis</i> *	Hymenachne	Yes	Restricted Category 3	Yes
Poaceae	<i>Megathyrsus maximus</i> *	Guinea Grass	-	-	-
Poaceae	<i>Melinis repens</i> *	Red Natal Grass	-	-	-
Verbenaceae	<i>Lantana camara</i> *	Lantana	Yes	Restricted Category 3	Yes
Verbenaceae	<i>Lantana montevidensis</i> *	Creeping Lantana	-	Restricted Category 3	Yes
Verbenaceae	<i>Stachytarpheta jamaicensis</i> *	Jamaica Snakeweed	-	-	-
Verbenaceae	<i>Stachytarpheta spp.</i> *	Snake Weed	-	-	-



APPENDIX

D

PROJECT AREA PEST SPECIES LIST



Table 10
Pest species
recorded to
date for the
Project area

Family	Common Name	Scientific Name	Status	
			Biosecurity Act 2014 (Qld)	Isaac Regional Council Biosecurity Plan 2024 - 2027
AMPHIBIANS				
Bufo	Cane Toad	Rhinella marina*	Another invasive animal	-
MAMMALS				
Bovidae	Domestic Cattle	Bos taurus*	Other invasive animal	-
Canidae	Wild dog	Canis familiaris*	Restricted Category 3,4,6	-
Canidae	Fox	Vulpes vulpes*	Restricted Category 3,4,5,6	Yes
Cervidae	Feral Red Deer	Cervus elaphus*	Restricted Category 3,4,6	Yes
Felidae	Feral Cat	Felis catus*	Restricted Category 3,4,6	Yes
Leporidae	European Rabbit	Oryctolagus cuniculus*	Restricted Category 3,4,5,6	-
Suidae	Feral Pig	Sus scrofa*	Restricted Category 3,4,6	Yes



APPENDIX

E

WEED CONTROL MEASURES



Table 11
Species-specific
weed control
measures for
priority
weeds in the
Project area

Species	Photograph	Control Action	Suitability			Timing and Frequency	Monitoring and Adaptive Management	References
			Small infestations	Dense infestations	Retreatment			
<i>Bryophyllum daigremontianum</i> (Mother of Millions)		Mechanical Control For small areas, pull up plants by hand and burn on a wood heap. Alternatively, bag the plants and dump them in a bin, the contents of which are buried at council refuse tips rather than being recycled into mulch.	Yes	No	Yes	Year-round	It is recommended to promote more desirable plant species that can outcompete future mother-of-millions seedlings and plantlets, which can be achieved through measures such as soil preparation, replanting, fertilisation, fire management, and improved land use. Infestations should be monitored to detect any resprouting or new germination. If initial control was insufficient or regrowth occurs, follow-up treatment should be undertaken.	(DAF, 2023)
		Herbicide Control Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. Herbicides include: - For open pastures - 2,4-D acid (e.g. Affray 300) at a rate of 7 Litres (L) /1000 L water per ha (70 millilitres [mL]/10 L water). High volume foliar spray (handgun). High volume foliar spray (knapsack). - For forested areas – - Triclopyr 300 grams (g)/L + Picloram 100 g/L (e.g. Conqueror) or Triclopyr 300 g/L + Picloram 100 g/L + Aminopyralid 8 g/L (e.g. Grazon Extra) at a rate of 50 mL/10 L water. High volume foliar spray (handgun, knapsack). Always add a wetting agent (e.g. BS-1000 or Chemwet 1000) at 100 mL/100 L water. Apply at flowering. - Fluroxypyr 200 g/L (e.g. Flagship 200) at a rate of 600 mL/100 L water + surfactant (consult label). Apply to seedlings and young plants before flowering. - Fluroxypyr 333 g/L (e.g. Starane Advanced) at a rate of 360 mL/100 L water + surfactant (consult label). Apply to seedlings and young plants before flowering. - Fluroxypyr 400 g/L (e.g. Comet 400) 300 mL/100 L water + surfactant (consult label). Apply to seedlings and young plants before flowering.	Yes	Yes	Yes	Year-round		
		Controlled Burns When suitable (e.g. after grading firebreaks), burn infestations and the accompanying debris on which other-of-millions plants thrive. This is the most economical form of control, encourages grass competition and lessens the problem for following years, requiring only spot spraying with selective herbicides.	Yes	Yes	Yes	Year-round		



Species	Photograph	Control Action	Suitability			Timing and Frequency	Monitoring and Adaptive Management	References
			Small infestations	Dense infestations	Retreatment			
<i>Cryptostegia grandiflora</i> (Rubber Vine)		Herbicide Control Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. For herbicide treatment you can use the basal bark spray on singular stemmed plants, cut stump treatment or soil application (only specific situations to avoid killing non-target vegetation). Herbicides include: - For open pastures – - Triclopyr 300 g/L, Picloram 100 g/L and Aminopyralid 8 g/L at rate of 350–500 mL/100 L water, applying to actively growing plants. High volume spray. Actively growing plants not infected with rust. Use the higher rate for dense stands higher than 1.5 metres (m) high at flowering. - Imazapyr 250 g/L at a rate of 4 mL per 100 L water. High volume application to actively growing plants - For native pastures – - Metsulfuron-methyl 600 g/kg at a rate of 15 g per 100 L water may be used as a high volume spray. High volume spray on actively growing plants. Apply to actively growing bushes up to 3 m high, October through April. Wetting agent is critical. Complete coverage is essential. May damage pasture legumes. - Aminopyralid 375 g/kg plus Metsulfuron-methyl 300 g/kg 30 g per 100L water plus wetting agent). Apply to bushes up to 3 m high. Apply from October to April when bushes are actively growing. Ensure thorough spray coverage of all foliage and leaders. Incomplete coverage will result in regrowth. - Triclopyr 75 g/L + Metsulfuronmethyl 28 g/L at a rate of 375 mL per 100L. Spray actively growing plants up to 3 m high, from October to April. Thoroughly spray all foliage and leaders. Incomplete coverage will result in regrowth. - For forested areas – - Triclopyr 600 g/L (e.g. Garlon 600, Triclopyr 600) at a rate of 1 L per 60 L Diesel Basal bark. Treat at any time. Thoroughly spray around base of plant. - Picloram 44.7 g/L + aminopyralid 4.47 g/L (Vigilant II). Use undiluted. Cut stump as close to the ground as possible. Apply immediately according to label instructions. The effectiveness of foliar herbicides is greatly reduced and should not be used when plants are infected with <i>Maravalia cryptostegiae</i> (Rubber Vine Rust; biocontrol agent). As Rubber Vine Rust is widespread in Queensland, it is likely that it is present at the site. Mechanical Treatment Slashing is not an effective control action for managing this species. However, it is suitable for cutting tracks and breaking apart infestations which provides greater access for applying other chemical controls or burns, where necessary. For scattered or medium-density infestations - Where possible, repeated slashing close to ground level is recommended. For dense infestations - slash during winter, stick-raking or blade-ploughing reduces the bulk of the infestation. Pasture should be sown and windrows burned to kill residual seed. Follow-up treatment is essential. Controlled burns A steady low-intensity grass-based fire can be useful where fuel load is suitable (sufficient to carry the fire, however, light enough to maintain a low-intensity fire). Following fire, herbicide control should be undertaken.	Yes, when rust is absent. Basal bark/cut stump or foliar spray	Yes, when rust is absent. Stick rake or blade plough and then foliar spray.	Yes, when rust is absent.	All year (except for Metsulfuron-methyl which is Oct-Apr) Annual treatment	No single control method is fully effective for this species; therefore, an integrated management approach is required. Regular monitoring should record the presence or absence of Rubber Vine Rust. Where it is absent, foliar spraying may be used, whereas in its presence, or where plants are already stressed, basal bark treatment or cut stump methods are preferred. Follow-up treatments after initial chemical control may include controlled burning, foliar spraying, basal bark application, or cut stump techniques, depending on site conditions, remaining infestation, and regrowth density. Where controlled burning is applied, follow-up management should incorporate appropriate chemical control methods. If fuel loads are insufficient to support a low-intensity burn, initial treatments such as herbicide application and/or slashing can promote grass growth and increase leaf litter, thereby building adequate fuel for subsequent burns. Infestations should be regularly monitored for signs of resprouting or new germination, and additional treatment should be implemented where initial control is incomplete or regrowth occurs.	(DAF, 2025b)
			No (herbicide preferred but can be combined with herbicide)	Yes	No	Winter–early spring Retreat as necessary, based on monitoring		
			Yes, (herbicide preferred but can be combined with herbicide)	Yes (herbicide preferred but can be combined with herbicide)	Yes	Dependent on suitable fuel load and conditions. Treat for two successive years		



Species	Photograph	Control Action	Suitability			Timing and Frequency	Monitoring and Adaptive Management	References
			Small infestations	Dense infestations	Retreatment			
<i>Harrisia martinii</i> (Harrisia Cactus)		Herbicide Control Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. Herbicides include: - For open pastures - - Aminopyralid 8 g/L + Picloram 100 g/L + triclopyr 300 g/L (e.g. Grazon Extra) at a rate of 500 mL/100 L water. Foliar spray. Thoroughly spray the plants. - Triclopyr 240 g/L and Picloram 120 g/L (at a rate of 1 L/60 L diesel), applied as an overall spray, wetting all areas to ground level. - For native pastures – - Metsulfuron-methyl 600 g/kg (e.g. Genfarm Metsulfuron 600 Herbicide) at a rate of 20 g/100 L water + 100 mL non-ionic surfactant/100 L. Foliar spray. Spray plant when actively growing to run-off point. A follow-up treatment may be necessary. - Aminopyralid 375 g/kg + Metsulfuron methyl 300 g/kg (e.g. Apparent Wasp 300) at a rate of 40 g/100 L water. Foliar spray. Spray to thoroughly wet using 1000 to 1400 L/ha. Follow-up treatment may be necessary. - For forested areas – - Glyphosate 360 g/L (e.g. Roundup). Undiluted to 1:1 in water. Stem injection. Apply 2 mL solution per 10 cm cut. There are a number of additional options for foliar spraying, all of them listed in the Queensland Government factsheet (DAF, 2025c).	Yes	Yes	Yes	Spring–late autumn	This species has a deep tuberous underground root system, making it challenging to control. It is therefore recommended to use a combination of control methods.	(DAF, 2025c)
						Retreat as necessary, based on monitoring survey results	Where feasible, treatment should be carried out in spring before fruit develops, to limit further seed production and reduce infestation density.	
							Infestations should be monitored to detect any resprouting or new germination. If initial control was insufficient or regrowth occurs, follow-up treatment should be undertaken.	
		Physical Control Dig out plants completely and burn. Ensure that all tubers that can grow are removed and destroyed. Ploughing is not considered an effective means of control unless followed by annual cropping.	Yes	No	Yes	All Year		
		Biological control Two introduced insects have become established in the field: - A stem-boring longicorn beetle (<i>Alcidion cereicola</i>). The stem-boring beetle only attacks older woody stems. - A mealy bug (<i>Hypogeococcus festerianus</i>). The most successful biological control agent is the Mealy bug. The mealy bug aggregates and feeds in the tips of stems and buds, where it limits growth and causes distortion. This results in the knotting of the stem. The plant's response is to utilise energy reserves within the tuber system to produce new growth. Eventually the plant dies, as it is unable to support the continuous high energy demands. The bug is manually spread by cutting infected stems and placing them into healthy plants.	Yes	No	No	Best results for the Mealy Bug come by infesting new areas during spring and early summer, from September to December		



Species	Photograph	Control Action	Suitability		Retreatment	Timing and Frequency	Monitoring and Adaptive Management	References
			Small infestations	Dense infestations				
<i>Hymenachne amplexicaulis</i> (Hymenachne)		Herbicide Control There are no herbicide products specifically registered for the control of Hymenachne in Queensland. However, there are two minor use permits that allows people generally to use herbicide products to control Hymenachne. These permits can only be used in non-agricultural areas, native vegetation, pasture and aquatic areas. Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant These herbicides include: • Glyphosate 360 g/L. Apply 14 L of product/ha Boom, handgun, knapsack or aerially (helicopter) up to four times per year • Haloxyfop 520 g/L (e.g. Verdict 520 herbicide). Apply 770 mL of product/ha. Aerial application (helicopter only) using boom spray or shielded spot spray	Yes	Yes, but only as strip spraying. Spraying an entire heavy infestation can cause Hymenachne to sink and result in biological hazards from the rotting vegetation. Large masses of decomposing Hymenachne may use all the oxygen in the water leading to fish kills. This problem can be avoided by spraying strips of the plant.	Yes	Prior to flowering, which starts usually in April. Boom, handgun, knapsack up to four times per year	Since floodwater can transport Hymenachne into new water bodies, monitoring shortly after flood events is recommended to detect new infestations. To maximise detection and limit seed spread, surveillance and control should be undertaken in March, as well as during spring and early summer following initial rainfall events. Infestations should be monitored to detect any resprouting or new germination. If initial control was insufficient or regrowth occurs, follow-up treatment should be undertaken.	(DAF, 2024f)
		Mechanical or physical control Mechanical or physical control will not completely eradicate Hymenachne because of the plant's ability to reproduce vegetatively from very small pieces.	Yes, in combination with other methods	Yes, in combination with other methods	Yes, in combination with other methods	Year-round		
		Controlled burns Burns can be effective to reduce biomass in combination with other control methods. Burns can further reduce the costs of other management options.	Yes, but in combination with other control methods	Yes, but in combination with other control methods	Yes, but in combination with other control methods	Year-round		
		Grazing Control Constant heavy grazing in dry conditions can remove Hymenachne.	Yes	No	Yes	Dry season		



Species	Photograph	Control Action	Suitability			Timing and Frequency	Monitoring and Adaptive Management	References
			Small infestations	Dense infestations	Retreatment			
<i>Jatropha gossypifolia</i> (Bellyache Bush)		Herbicide Control Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. These herbicides include: - For native pastures – - Metsulfuron-methyl 600 g/kg (e.g. Associate) at a rate of 10 g/100 L + penetrant. Thoroughly wet plants and apply when actively growing. - Triclopyr as Butotyl 75 g/L + Metsulfuron-methyl 28 g/L (e.g. Brush Weed) at a rate of 0.25 L/100 L. Spray just before flowering when plant is in full leaf and actively growing - For open pastures and forested area – - Fluroxypyr as mhe 200 g/L (e.g. FMC Fluroxypyr 200 Herbicide) at a rate of 0.5 L/100 L. Thoroughly wet plants and apply when actively growing. - Fluroxypyr 400 g/L (e.g. Comet 400) at a rate of Fluroxypyr 400 g/L (e.g. Comet 400). Thoroughly wet plants and apply when actively growing.	Yes	Yes	Yes	Ideally outside the seeding time (March – July) to avoid further spread.	Infestations should be monitored to detect any resprouting or new germination. If initial control was insufficient or regrowth occurs, follow-up treatment should be undertaken.	(DAF, 2025a) Queensland Department of Employment Economic Development and Innovation (2009)
		Mechanical Control Bellyache Bush is a shallow rooted species and can therefore relatively easily pulled out. Repeated slashing has been found to help reduce its density within infested areas.	No	Yes, if there is sufficient fuel load	Yes, but it depends on the infestation density and fuel amount			
		Grazing Control A healthy pasture consisting of large numbers of perennial grasses can effectively inhibit or increase time for an infestation to develop. Pasture management to maintain ground cover post treatment significantly reduces seedlings survival through competition.	No, prevention following treatment only	No, prevention following treatment only	No, prevention following treatment only	Year-round		
		Controlled Burns Bellyache Bush, particularly young plants are sensitive to fire. The success of fire management can depend on the amount of fuel load as Bellyache bush plants tend to blister but not burn; hence, grass fuel load is required to allow the fire to reach sufficient intensity to kill the plants. Seeds are susceptible to fire but some in the soil may survive. Where chemical or mechanical control is not appropriate, handheld burners or flammers have proven effective for bellyache bush control.	Yes	Yes	Yes	Timing is dependent on fuel load and conditions. Care should be taken during dry periods.		



Species	Photograph	Control Action	Suitability			Timing and Frequency	Monitoring and Adaptive Management	References
			Small infestations	Dense infestations	Retreatment			
<i>Lantana camara</i> (Lantana) and <i>Lantana montevidensis</i> (Creeping Lantana)		Herbicide Control Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. These herbicides include: - For open pastures and forest areas – - Fluroxypyr 200 g/L (e.g. Fluroxypyr 200) at a rate of 500 mL to 1 L/100 L water. October to April. Thorough wetting of plants is required, lower rate for seedlings and regrowth 0.5–1.2 m high, higher rate for plants and regrowth 1.2–2 m high. - Glyphosate 450 g/L (e.g. Glyphosate 450) at a rate of 800 mL/100 L. October to April. Wet plant thoroughly. Glyphosate affects any green plant it comes into contact with. Glyphosate is available in a range of strengths. Consult labels for rates for other glyphosate formulations. - Triclopyr 300 g/L + Picloram 100 g/L + Aminopyralid 8 g/L (e.g. Grazon Extra) at a rate of 350–500 mL/100 L water. Summer to Autumn. Wet plant thoroughly. Use the higher rate on plants over 1 m high. Legumes may be affected if sprayed. - For native pastures – - Metsulfuron-methyl 600 g/kg (e.g. Associate) at a rate of 10 g/100 L water plus wetter. March to May. Plants up to 2 m high. Thoroughly wet all foliage and stems. Spray should penetrate throughout the bush. Addition of a wetting agent e.g. Pulse is recommended. Results variable. Not found effective in tropics. Follow-up sprays are necessary. - Glyphosate 360 g/L (e.g. Weedmaster Duo) + Metsulfuron-methyl 600 g/L (e.g. Associate) at a rate of 400 mL glyphosate + 3 g metsulfuron/100 L water, March to May. Apply to actively growing bushes up to 2 m high. Spray to thoroughly wet all foliage and stems. Spray to penetrate throughout the bush. Do not apply during periods of summer drought stress. Addition of a wetting agent e.g. Pulse is recommended.	Yes	Yes	Yes	Different times dependent on herbicide type to be used.	Initial control may stimulate rapid regrowth of the species, therefore follow-up treatments are required to prevent increases in infestation density and to maintain the effectiveness of the initial intervention. Subsequent monitoring should continue to detect any resprouting or new germination. Where feasible, controlled burning should be undertaken when lantana plants are in poor condition, as recovery following fire is then less likely. Management should generally proceed from lightly infested areas toward denser infestations, applying a combination of control methods. For extensive infestations, foliar herbicide application is often not cost-effective; instead, approaches such as fire, dozing or stick raking, slashing or cutting, and aerial spraying are recommended to reduce biomass, thereby enabling more targeted and economical follow-up herbicide treatments. Given that lantana seeds can persist in the soil seedbank for up to four years, repeated follow-up treatments are essential before seeds reach maturity.	(DAF, 2025d)
		Mechanical Control Stick raking or ploughing can be effective in removing standing plants. However, regrowth from stumps and/or increased seedling germination in disturbed soil is common and the site will require follow-up treatment. Grubbing of small infestations—for example, along fence lines—can be a useful and effective method of removing plants, although this is time consuming. Repeated slashing can also reduce the vigour of lantana, exhausting its stored resources and reducing its likelihood of re-shooting. Some locations—for example, very steep inclines or gullies—are not suitable for mechanical control options because of the danger of overturning machinery and soil erosion.	Yes	Yes	No	Before seeds are developed	Mechanical control methods should be avoided on steep terrain due to the risks of soil erosion and machinery instability. In accordance with the IRCBP, initial management should prioritise physical control methods over chemical approaches. For larger	
		Controlled burning Regular burning will reduce the capacity of plants to survive; however, initial kill rates are variable. The effectiveness of this method will depend on the suitability of available fuel loads, fire intensity, temperature, relative humidity, soil moisture and season. Pasture re-establishment can then provide competition to inhibit lantana seed germination. Fire is not recommended in non-fire tolerant vegetated areas such as rainforest or wooded or plantation areas.	Yes	Yes,	Yes	Timing is dependent on fuel load and conditions. Repeat treatment following regrowth from initial burn, in summer prior to rain.		

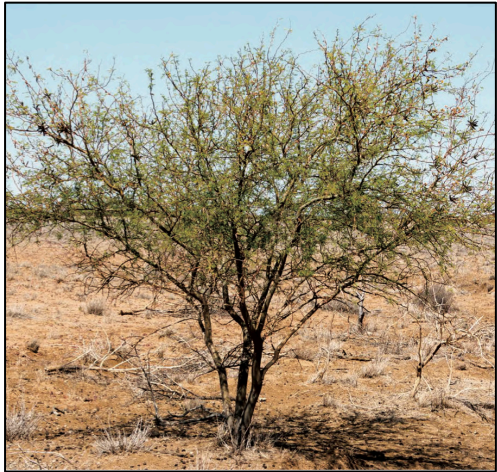


Species	Photograph	Control Action	Suitability			Timing and Frequency	Monitoring and Adaptive Management	References
			Small infestations	Dense infestations	Retreatment			
		Biological Control Biological control alone should not be relied upon for managing lantana infestations. The four most important biological control agents are: • Sap-sucking Bug (<i>Teleonemia scrupulosa</i>). Found in dry areas from Cooktown to Wollongong, the small, mottled bug feeds on the underside of leaves, growing tips and flower buds, causing the leaves to drop early and stop the plant from flowering. • Leaf-mining Beetle (<i>Uroplata girardi</i>). Found in most lantana infestations from Cape Tribulation to Sydney as well as around Darwin, except in very dry or high altitude areas. The adult beetles are dark brown. They shelter in curled leaves and feed on the upper leaf surfaces. Larvae feed in leaves causing blotches to spread across the leaf. This beetle reduces plant vigour and can suppress flowering. • Leaf-mining beetle (<i>Octotoma scabripennis</i>). Found in most lantana infestations from Atherton to Wollongong. Adults of this species feed on the upper leaf surface, while larvae feed and mine the centre of the leaf and cause blotches. This activity reduces plant vigour and can suppress flowering. • Seed-feeding Fly (<i>Ophiomyia lantanae</i>). Found from Cape Tribulation to Eden in New South Wales and also around Darwin and Perth. <i>Ophiomyia</i> is a small black fly that feeds on flowers and lays eggs on the green fruits. The maggots of the fly eat the seed and make the fruit unattractive to birds, reducing seed spread.	Yes	Yes,	Yes	Year-round	infestations, physical treatments should be applied first, followed by targeted herbicide use for subsequent spot control.	
<i>Leucaena leucocephala</i> (Leucaena)		Herbicide Control Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. These herbicides include: • For open pastures – ◦ Triclopyr (240 g/L) + Picloram 120 g/L (e.g. Access®) at a rate of 1 L per 60 L diesel or Biosafe. Basal bark (for plants with stem diameter <5 centimetres [cm]). Cut stump method Plants up to and in excess of basal bark size. • For forested areas – ◦ Triclopyr 300 g/L + Picloram 100 g/L (e.g. Conqueror) or Triclopyr 300 g/L + Picloram 100 g/L + Aminopyralid 8 g/L (e.g. Grazon Extra) at a rate of 350–500 mL per 100 L water. Spot spraying where residual plant control is required. Add a wetting agent or spray oil according to label instructions. Seedlings only.	Yes	Yes	Yes	Year-round	Infestations should be monitored to detect any resprouting or new germination. If initial control was insufficient or regrowth occurs, follow-up treatment should be undertaken. Small plants can be manually removed, provided the entire root system is extracted. Targeted grazing may also be effective when plants are still within reach of livestock. However, for larger plants or dense infestations, these methods are generally impractical.	(DAF, 2025e)



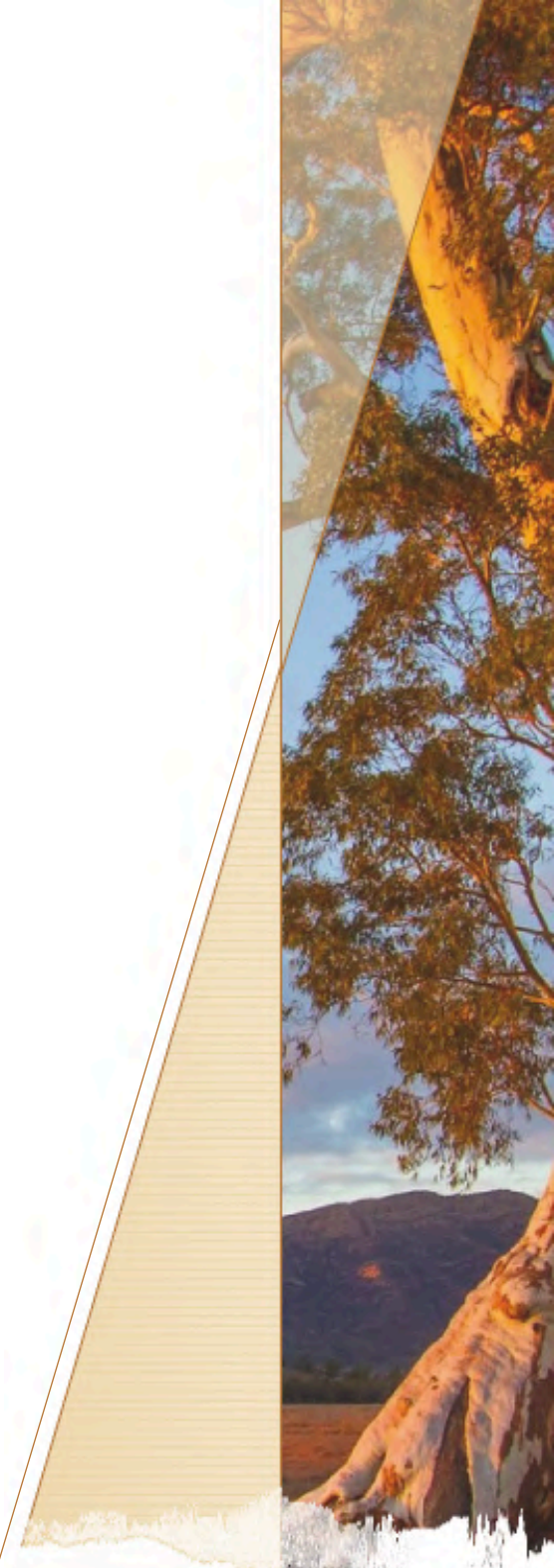
Species	Photograph	Control Action	Suitability			Timing and Frequency	Monitoring and Adaptive Management	References
			Small infestations	Dense infestations	Retreatment			
<i>Opuntia</i> spp. (Prickly Pear)		Herbicide Control Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. These herbicides include: - For open pastures – - Triclopyr 240 g/L + Picloram 120 g/L (e.g. Access) at a rate of 1 L/60 L diesel. Apply as an overall spray - For forested areas – - Aminopyralid 8 g/L + Picloram 100 g/L + triclopyr 300 g/L (e.g. Grazon Extra) at a rate of 500 mL/100 L of water. Foliar spray. - Triclopyr 600 g/L (e.g. Garlon) at a rate of 3000 mL/100 L of water. Foliar spray –slow acting. - Glyphosate 360 g/L (Roundup Biactive). Undiluted to 1:1 in water. Stem injection. Apply 2 mL solution per 10 cm cut. - Metsulfuron Methyl 600g/kg (e.g. Kenso Agcare Ken-Met 600) at a rate of 2 g/L of water + Pulse Penetrant. Stem injection. Apply 1 mL injected into cuts at 10 cm spacing.	Yes	Yes	Yes	Year-round Retreat as necessary, based on monitoring survey results	Where feasible, treatment should be carried out in spring before fruit develops, to limit further seed production and reduce infestation density. Infestations should be monitored to detect any resprouting or new germination. If initial control was insufficient or regrowth occurs, follow-up treatment should be undertaken.	(DAF, 2026e)
<i>Parthenium hysterophorus</i> (Parthenium)		Herbicide Control Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. These herbicides include: - For open pastures – 2,4-D as amine 625 g/L (e.g. Ken-Amine 625) at a rate of 320 mL per 100 L water. Spot spray. Apply to young actively growing plants, ensuring thorough coverage. - For native pastures – - Aminopyralid 375 g/kg plus Metsulfuron-methyl 300 g/kg (e.g. Stinger) at a rate of 10 g per 100L water plus wetting agent. - Metsulfuron-methyl 600 g/L (e.g. Associate) at a rate of 5 g per 100 L water + wetter in hand gun -Spray to thoroughly wet all foliage but not to cause runoff; or 7 g/ha + wetter in boom spray - for pastures only, treat in rosette stage (consult label). - Triclopyr 75 g/L + Metsulfuron-methyl 28 g/L (e.g. Zelum Brush Weed) at a rate of 125 mL per 100 L water. Spot spray plants from rosette to flowering (consult label).	Yes	Yes	Yes	Spring–early summer, after germination Annual treatment	Well-maintained pastures with high grass crown cover can suppress parthenium establishment, whereas drought conditions that reduce pasture cover create opportunities for colonisation when favourable conditions return. There it is recommended to maintain pasture cover. Vehicles and machinery operating in infested areas should be thoroughly cleaned to prevent seed spread, with particular attention given to earthmoving and harvesting equipment. Wash-down should be carried out in a designated area so that any plants emerging from dislodged seeds can be controlled before setting seed.	(DAF, 2025g)
		Manual Control Hand pulling of small areas is not recommended. There is a health hazard from allergic reactions and a danger that mature seeds will drop off and increase the area of infestation.	Yes	Yes	Yes	Year-round		
		Pasture Management Grazing management is the most useful method of controlling large-scale parthenium infestations. Maintain pastures in good condition with high levels of ground and grass crown cover. This may require rehabilitation of poor pastures, followed by a sound grazing maintenance program.	Yes	Yes	Yes	Year-round	Infestations should be monitored to detect any resprouting or new germination. If initial	



Species	Photograph	Control Action	Suitability			Timing and Frequency	Monitoring and Adaptive Management	References
			Small infestations	Dense infestations	Retreatment			
		Biological Control There are currently a number of insect species and two rust pathogens that have been introduced to control parthenium. A selection of these are outlined below. • <i>Epiblema strenuana</i> is a moth introduced from Mexico and is established in all Parthenium areas. The larval stage feed inside the stem, forming galls that stunt the plant's growth, reduce competitiveness and seed production. • <i>Listronotus setosipennis</i> is a stem-boring weevil from Argentina but is of limited success in reducing parthenium infestations and can found throughout northern Queensland. • <i>Zygogramma bicolorata</i> is a defoliating beetle from Mexico which is highly effective where present. It emerges in late spring and is active until autumn. • <i>Smicronyx lutulentus</i> is a seed-feeding small grey weevil from Mexico. It lays eggs in the flower buds where the larvae feed on the seed heads. • <i>Conotrachelus albocinereus</i> is a stem-galling weevil from Argentina that produces small stem galls and can be found localised established throughout Queensland. • <i>Bucculatrix parthenica</i> is as small leaf-mining moth from Mexico. The larvae feed on leaves, leaving clear windows, reducing photosynthetic capabilities. • <i>Carmenta ithacae</i> is a clearwinged stem-boring moth from Mexico. The larval stage feed within the stem and can be found throughout northern and central Queensland. • <i>Puccinia abrupta</i> var. <i>parthenicola</i> is a winter rust from Mexico that infects and damages leaves and stems. It is currently established in southern Queensland when weather conditions are suitable. • <i>Puccinia xanthii</i> var. <i>parthenii-hysterophorae</i> is a summer rust from Mexico that weakens the plant by damaging the leaves over the summer growing season. It is currently established in northern Queensland.	Yes	Yes	Yes	Year-round	control was insufficient or regrowth occurs, follow-up treatment should be undertaken.	
<i>Vachellia farnesiana</i> (Mimosa Bush)		Herbicide Control Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. These herbicides include: • For open pastures – ◦ Fluroxypyr 200 g/L (e.g. Acclaim, Fluroxypyr 200). Refer to the product label for the correct rate of use. Basal bark/cut stump. Plants up to 5 cm basal diameter. Ensure all stems on multi-stemmed plants are treated. ◦ Triclopyr 240 g/L + Picloram 120 g/L (e.g. Access®) at a rate of 1 L/60 L diesel. Basal bark - Plants up to 5 cm basal diameter. Cut stump - Plants up to and in excess of basal bark diameter	Yes	Yes	Yes	Autumn Retreat as necessary, based on monitoring survey results	The species is relatively short-lived and subject to periodic dieback; therefore, ongoing monitoring is required to assess whether control interventions are needed. Either cut stumping or basal bark spraying can be utilised for control treatments, depending on suitability and preference. Where practicable, cut stumping treatment will occur prior to pod formation (early summer) in order to prevent further seed production and control infestation density. Infestations should be monitored to detect any resprouting or new germination. If initial control was insufficient or regrowth occurs, follow-up treatment should be undertaken.	(DAF, 2025f)



Species	Photograph	Control Action	Suitability			Timing and Frequency	Monitoring and Adaptive Management	References
			Small infestations	Dense infestations	Retreatment			
<i>Vachellia nilotica</i> (Prickly Acacia)		Herbicide Control Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Where the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. These herbicides include: - For open pastures and forested areas – - Fluroxypyr 200 g/L (e.g. Fluroxypyr 200) or glyphosate 333 g/L (e.g. Starane Advanced) Fluroxypyr 400 g/L (e.g. Flagship). Consult label. Basal bark/cut stump. Basal bark only when plant is actively growing and up to 10 cm basal diameter. Cut stump at any time of year and for all plant sizes. Swab or spray stump within 15 seconds of cutting.	Yes	Yes	Yes	Year-round	Initial control may stimulate rapid regrowth of the species; therefore, annual follow-up treatments should be implemented for up to eight years to prevent increases in infestation density and to maintain the effectiveness of the initial intervention. Beyond this period, infestations should continue to be monitored for any resprouting or new germination. Where feasible, treatment should be undertaken in early spring, prior to pod formation, to limit further seed production and reduce infestation density.	(DAF, 2026f)
		Mechanical Control - Grubbing Grubbing is ideal for large areas of scattered to medium density infestations. Wheeled tractors are usually used with a scoop or grubbing attachment. This method requires a tractor of around 80 hp. Trees greater than 15 cm in diameter can be difficult to grub out. Grubbing is best undertaken from May to September or before pod drop. - Pushing Pushing with dozers or loaders is useful for large areas of medium density infestation. Timing of this method should be restricted to May-September to lessen the establishment of seedling regrowth or during drought conditions. Massive seedling emergence may occur in areas around permanent waters and drainage lines. - Stick racking This technique utilises a stick rake with cutter bars attached to the bottom of the tines. Timing should be restricted to May-September or during drought conditions. Costs vary depending on the density of plants, terrain, operator skills and machinery used. This method gives immediate results and clean country - Double chain pulling This method is adopted by those with high density Prickly Acacia. It is effective against established stands but not plants below 40 mm in basal diameter. Timing is important and the technique is best applied in the second year of drought, or before the first pod drop coming out of drought. Chaining along drainage lines and waterways is not recommended due to the high seed loads and the high probability of re-establishment	Yes	No	Yes	May-September or during drought conditions		
		Biological Control Seven insects have been introduced into Australia as biological control agents against Prickly Acacia with three of these establishing and providing some benefit. The beetle <i>Bruchidius sahlbergi</i> established successfully and is now widespread. Seed predation is generally low but may reach up to 80% where mature pods are available. The leaf-feeding caterpillar <i>Chiasmia assimilis</i> is exerting pressure on Prickly Acacia mainly in coastal locations by stripping leaf material. <i>Acaciothrips ebneri</i> , gall-forming thrips from Ethiopia were released in 2023. With a short lifecycle, the thrips multiply quickly, causing galls on the new growth tips and flowerheads.	Yes	Yes	Yes	Year-round		



APPENDIX

F

PEST CONTROL MEASURES



Suitability of control actions

Table 12
Pest animal
control
measures

Species	Baiting	Shooting	Trapping	Biocontrol	Habitat manipulation	Timing and Frequency	Monitoring and Adaptive Management	References
Cane Toad (<i>Rhinella marina</i>)	No	No	Yes	No	No	Appropriate timing varies depending on the control method; therefore, the references listed here should be consulted to determine when selected techniques should be applied. Follow-up treatments to be carried out as required, based on the outcomes of monitoring surveys	Cane toad populations to be regularly monitored to assess changes in abundance, alongside monitoring impacts on susceptible native fauna identified in the threat abatement plan. In particular, <i>Varanus</i> spp., previously recorded during surveys, are highly vulnerable due to lethal toxicity following ingestion. If Cane Toad densities reach unacceptable levels within the Project area, or if impacts on native fauna are observed, appropriate control measures to be implemented. Individual toads can be humanely euthanised using commercially available sprays, or, where appropriate, by stunning followed by decapitation carried out by trained personnel. The removal of eggs from small water bodies, such as ponds, can also be an effective control measure. As no effective landscape-scale control methods are currently available, management actions may be undertaken independently of coordinated control programs with neighbouring landholders. Following control implementation, monitoring to be conducted to evaluate effectiveness. Where outcomes are insufficient, underlying causes to be identified and management approaches adapted accordingly.	(DAF, 2025b) (DSEWPaC, 2011)
European Rabbit (<i>Oryctolagus cuniculus</i>)	Yes, 1080 baiting and warren fumigation	Yes, ground shooting	Yes, for small populations	Yes, bait delivering Rabbit Haemorrhagic Disease Virus (RHDV1) K5 strain	Yes, warren ripping and surface harbour destruction	Appropriate timing varies among control methods; therefore, the references listed here should be consulted to determine when selected techniques should be applied.	Rabbit control is most effective when undertaken collaboratively by all landholders within a district. Long-term population reduction requires an integrated approach, including techniques such as fumigation, warren ripping, and the removal of harbour. Sustained and cost-effective outcomes can be achieved by applying a combination of these methods. Control measures and timing of implementation to manage European Rabbit	(DAF, 2025h) (DEWHA, 2008a)



Species	Suitability of control actions					Habitat manipulation	Timing and Frequency	Monitoring and Adaptive Management	References
	Baiting	Shooting	Trapping	Biocontrol					
							Regular follow-up treatments to be maintained throughout the duration of the plan.	populations in the Project area will therefore be implemented in conjunction with surrounding landholders. Control efforts vis shooting should be aligned with feral cat management to maximise ecological outcomes. As rabbits can rapidly recolonise treated areas, ongoing integrated management with regular follow-up interventions is essential. Initial control options include baiting with 1080 or the application of RHDV1. To prevent rapid reinfestation, these should be immediately followed by measures such as surface harbour destruction and warren ripping or fumigation. Subsequent management will involve continued baiting, fumigation, trapping, or ground shooting to maintain low population densities. Monitoring to be conducted regularly to assess population density and evaluate the effectiveness of control measures. If initial or follow-up actions prove insufficient, the underlying causes to be identified and management approaches adjusted accordingly.	
European Red Fox (<i>Vulpes vulpes</i>)	Yes, 1080 baiting or PAPP baiting	Yes, if populations are small	No	No	No	No	Suitable timing differs for each recommended control measure; therefore, the references listed here should be consulted to determine when selected techniques should be applied. Follow-up control to be implemented as necessary, based on	Control measures and timing of implementation to manage Fox populations in the Project area to be implemented in conjunction with surrounding landholders. Monitoring will occur regularly to determine population density. After implementing control measures, monitoring to be conducted to determine success of controls. If initial and/or follow-up control measures are deemed insufficient, the reasons for such insufficiency to be determined and control measures adjusted accordingly.	(DAF, 2026d) (DEWHA, 2008c)



Suitability of control actions						Timing and Frequency	Monitoring and Adaptive Management	References
Species	Baiting	Shooting	Trapping	Biocontrol	Habitat manipulation			
Feral Cat (<i>Felis catus</i>)	No	Yes, ground shooting (night)	Yes (Audible recorded lures, mimicking the distress call of a small animal or visual lures (e.g. feathers) may be used to draw a predator to a trap site.)	No	No	monitoring survey results. Appropriate timing varies between control methods; therefore, the references listed here should be consulted to determine when selected techniques should be applied. Follow-up treatments to be undertaken as required, based on the outcomes of monitoring surveys.	Control measures and their timing for managing feral cat populations in the Project area to be implemented in coordination with neighbouring landholders, in accordance with the annual prioritisation schedule. Feral Cat control via shooting should coincide with European Rabbit control. To maximise ecological outcomes. Monitoring to be undertaken regularly to assess population density and evaluate the effectiveness of control measures. Where initial actions are insufficient, the underlying causes to be identified and management approaches refined accordingly.	(DAF, 2026a) (DoE, 2015)
Feral Red Deer (<i>Cervus elaphus</i>)	No	Yes, aerial shooting (large populations) or ground shooting (small populations)	No	No	No	The timing of control actions varies depending on the method; therefore, the references listed here should be consulted to determine when selected techniques should be applied. Follow-up treatments to be undertaken as required, based on monitoring outcomes.	Control measures and their timing for managing feral deer populations in the Project area to be implemented in coordination with neighbouring landholders. Appropriate control methods to be selected based on current population density. Monitoring to be undertaken regularly to assess population levels and evaluate the effectiveness of control measures. Where initial or follow-up actions are insufficient, the underlying causes to be identified and management strategies refined accordingly.	(DAF, 2026c)



Suitability of control actions

Species	Baiting	Shooting	Trapping	Biocontrol	Habitat manipulation	Timing and Frequency	Monitoring and Adaptive Management	References
Feral Pig (<i>Sus scrofa</i>)	Yes, 1080 baiting	Yes, aerial shooting	Yes, for small populations	No	No	The timing of control actions varies depending on the method; therefore, the references listed here should be consulted to determine when selected techniques should be applied. Follow-up treatments to be undertaken as required, based on monitoring outcomes.	Due to the fact that feral pigs can have large home ranges, control measures and their timing for managing feral pig populations in the Isaac Extension Project area to be implemented in coordination with neighbouring landholders, in accordance with the annual prioritisation schedule. Appropriate control methods to be selected based on population density. For high-density populations, initial control may involve baiting or aerial shooting, followed by repeat baiting or trapping to maintain low population levels. Monitoring will be conducted regularly to assess population density and evaluate the effectiveness of control measures. Where initial or follow-up actions are insufficient, the underlying causes to be identified and management strategies refined accordingly.	(DAF, 2026b) (DoEE, 2017) (National Feral Pig Action Plan Steering Group (NFPAP Steering Group), 2021)
Wild Dog (<i>Canis familiaris</i>)	Yes, 1080 baiting	Yes, ground shooting	Yes, for small populations	No	No	Suitable timing differs for each recommended control measure; therefore, the references listed here should be consulted to determine when selected techniques should be applied. Regular follow-up controls to be implemented for the duration of the plan.	Wild dogs can rapidly recolonise treated areas, particularly where control programs are inconsistent or not applied across the broader landscape. Effective management requires coordinated action among landholders using a range of control methods. Monitoring will occur regularly to determine population density. After implementing control measures, monitoring to be conducted to determine success of controls. If initial and/or follow-up control measures are deemed insufficient, the reasons for such insufficiency to be determined and control measures adjusted accordingly.	(DAF, 2025j) (AWI, 2020)

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