

# Weed Management Strategy

## NT Vacant Crown Land



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1.0	July 2020	Sharon Jones	First version

Acronyms	Full form
NT	Northern Territory
CLE	Crown Land Estate
DIPL	Department of Infrastructure Planning and Logistics
the Act	Weeds Management Act 2011
VCL	Vacant Crown Land
WMB	Weed Management Branch
DENR	Department of Environment and Natural Resource
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
WMP	Weed Management Plan
NTG	Northern Territory Government
NTLC	Northern Territory Land Corporation
Strategy	Weed Management Strategy

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# 1. Introduction

## 1.1. Crown land

Crown Land Estate (CLE) in the Department of Infrastructure, Planning and Logistics (DIPL) is responsible for managing Crown land in the Northern Territory (NT). Crown land comprises vacant crown land (VCL), DIPL managed road reserves and some landholdings of the Northern Territory Land Corporation (NTLC) (where there is a formal agreement in place between the NTLC and DIPL in relation to management of the land). VCL comprises some land under freehold title, all land that is not under freehold title or lease arrangements, and includes over 10,000 separate land parcels spread throughout the NT. For the purposes of this document, Crown land does not include land owned by the NTG that is under the care and control of another agency. The total area of VCL is approximately 52,000 km<sup>2</sup> comprising urban/rural land and pastoral land, and river esplanades (Figures 1 to 13).

Maintenance of Crown Land includes litter control, weed control, fire management, maintenance of fire breaks and management of illegal use. All VCL is bound by the Weeds Management Act 2011 (the Act) and the CLE is obligated to manage weeds on all land under the Act (Section 2.1). This Weed Management Strategy (Strategy) presents DIPL's approach to managing existing and potential weeds across VCL (excluding road reserves) in the NT.

This Strategy supersedes the 'Crown Managed Land Weed Management Strategy' prepared in 2010 by the Department of Lands and Planning in collaboration with Department of Natural Resources, Environment, the Arts and Sport (DLP 2010).

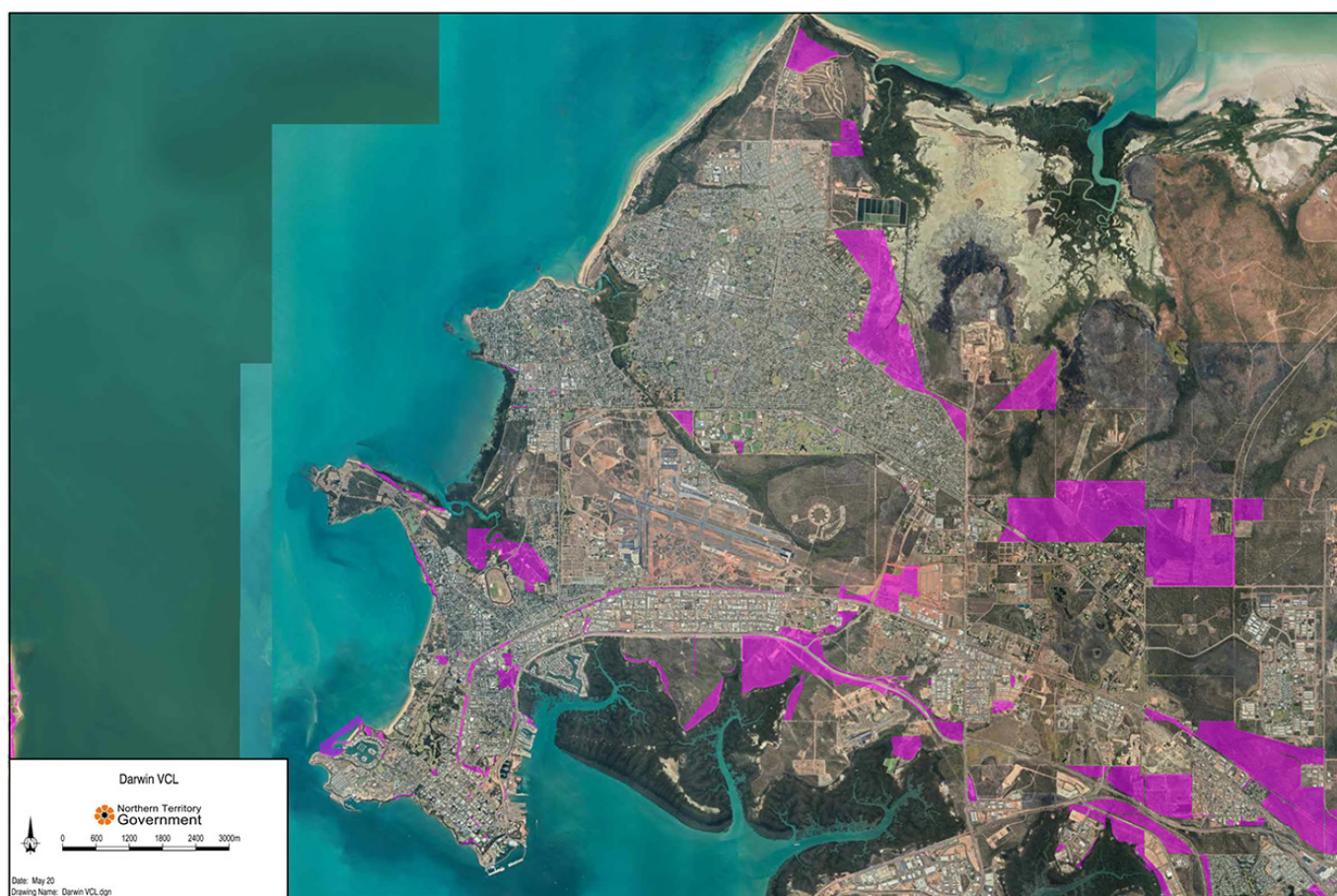


Figure 1 Vacant Crown Land in the Darwin area

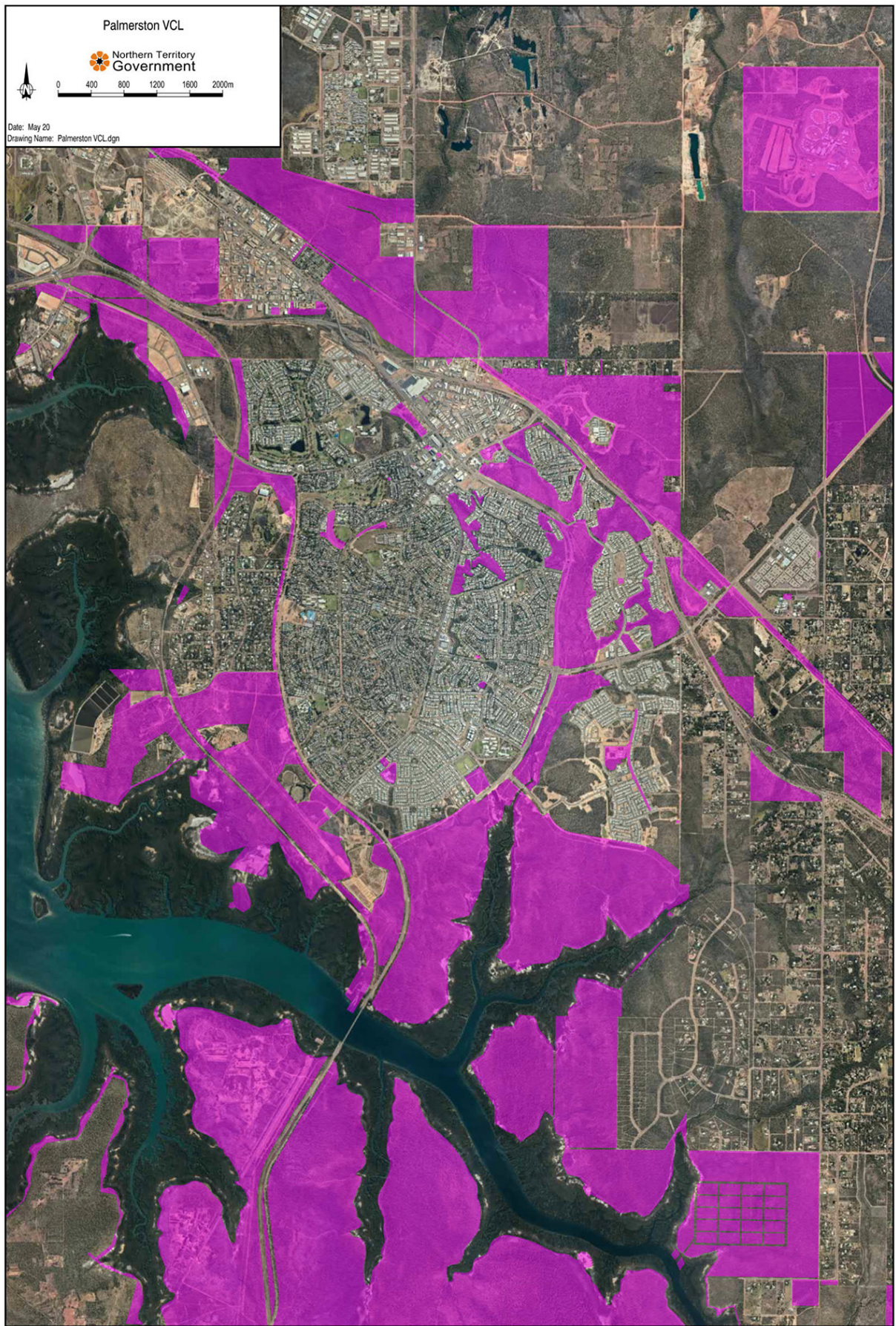


Figure 2 Vacant Crown Land in the Palmerston area

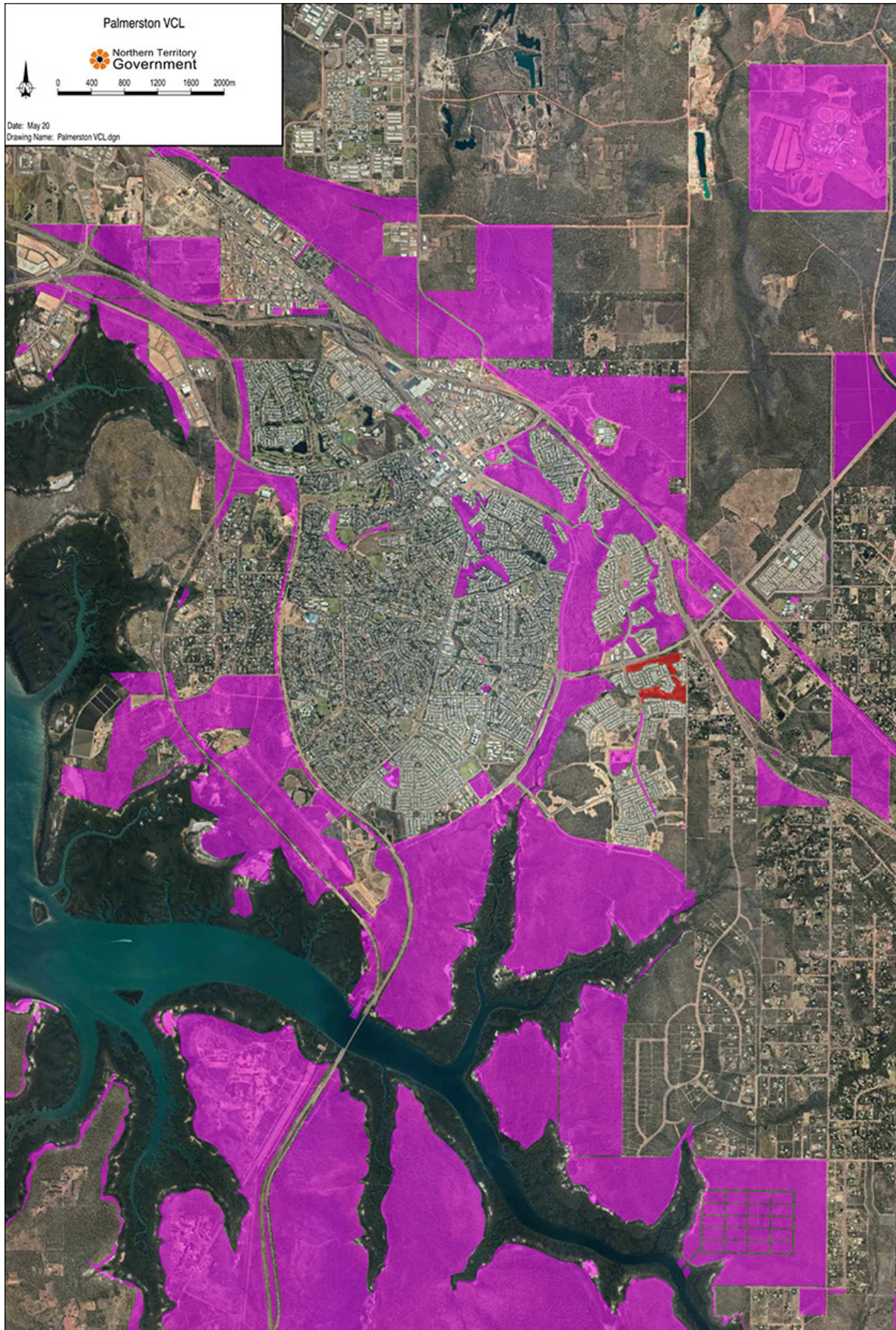


Figure 3 Vacant Crown Land in the Palmerston area (Lots 1179 and 12793)

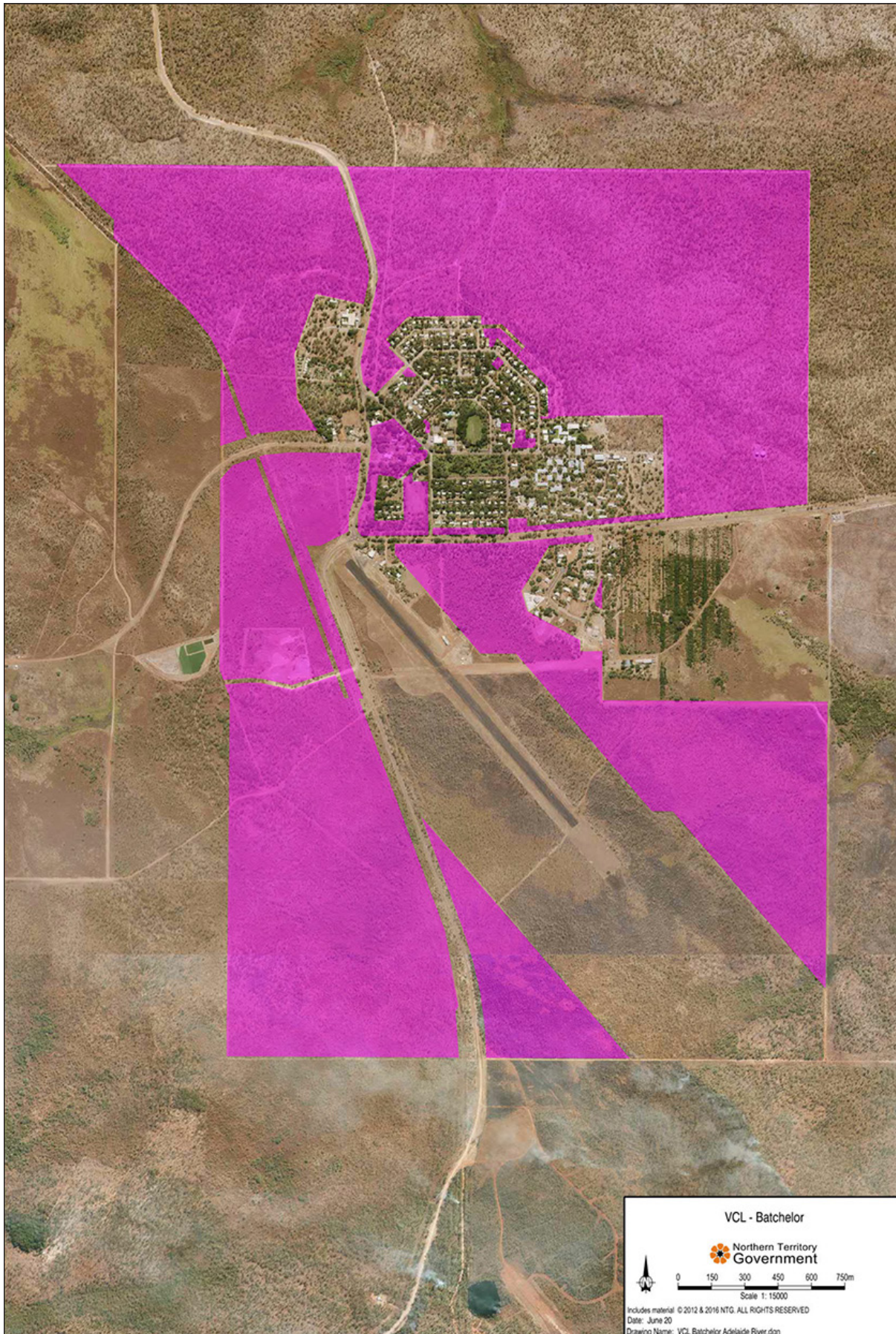


Figure 4 Vacant Crown Land in the Batchelor area

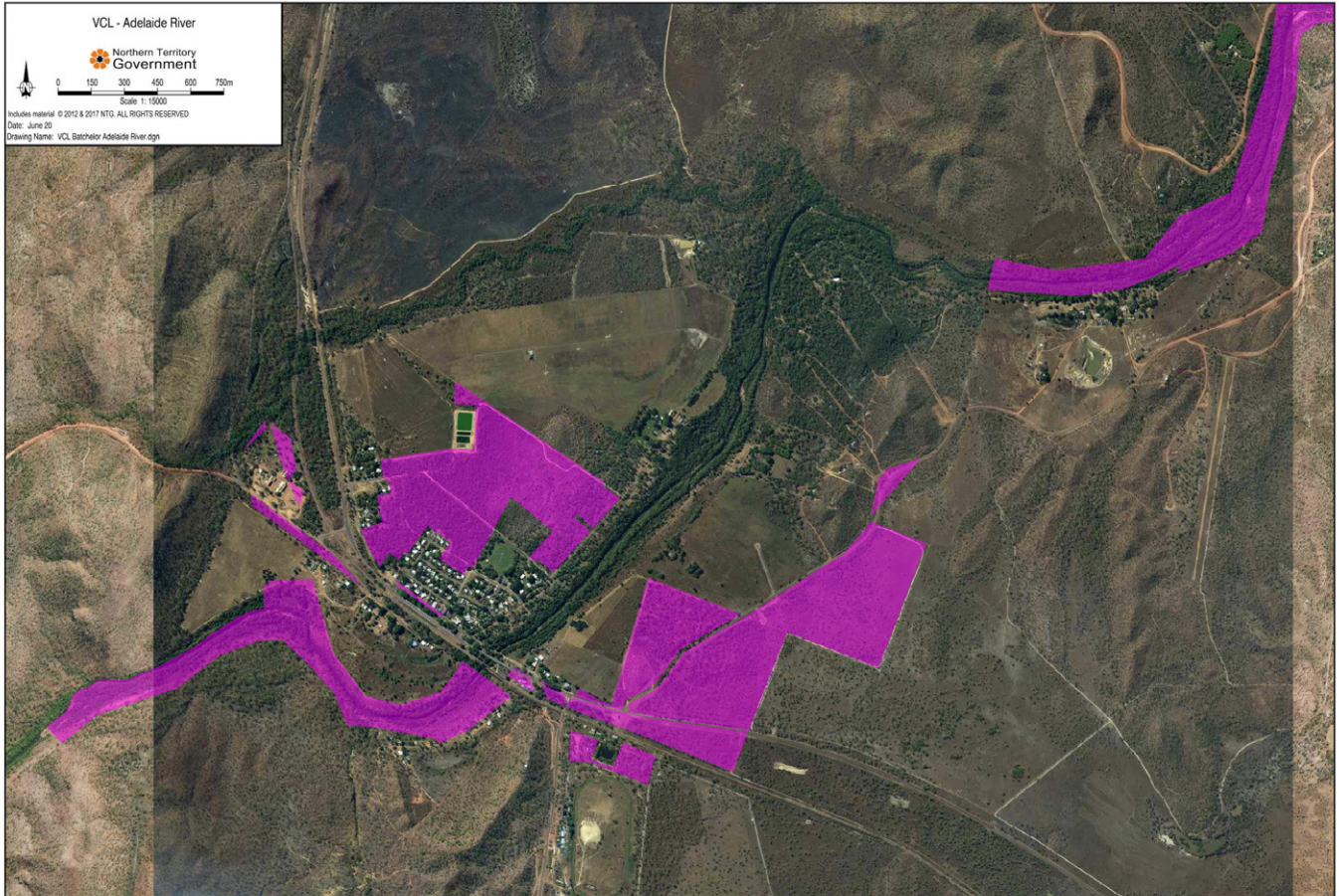


Figure 5 Vacant Crown Land in the Adelaide River area

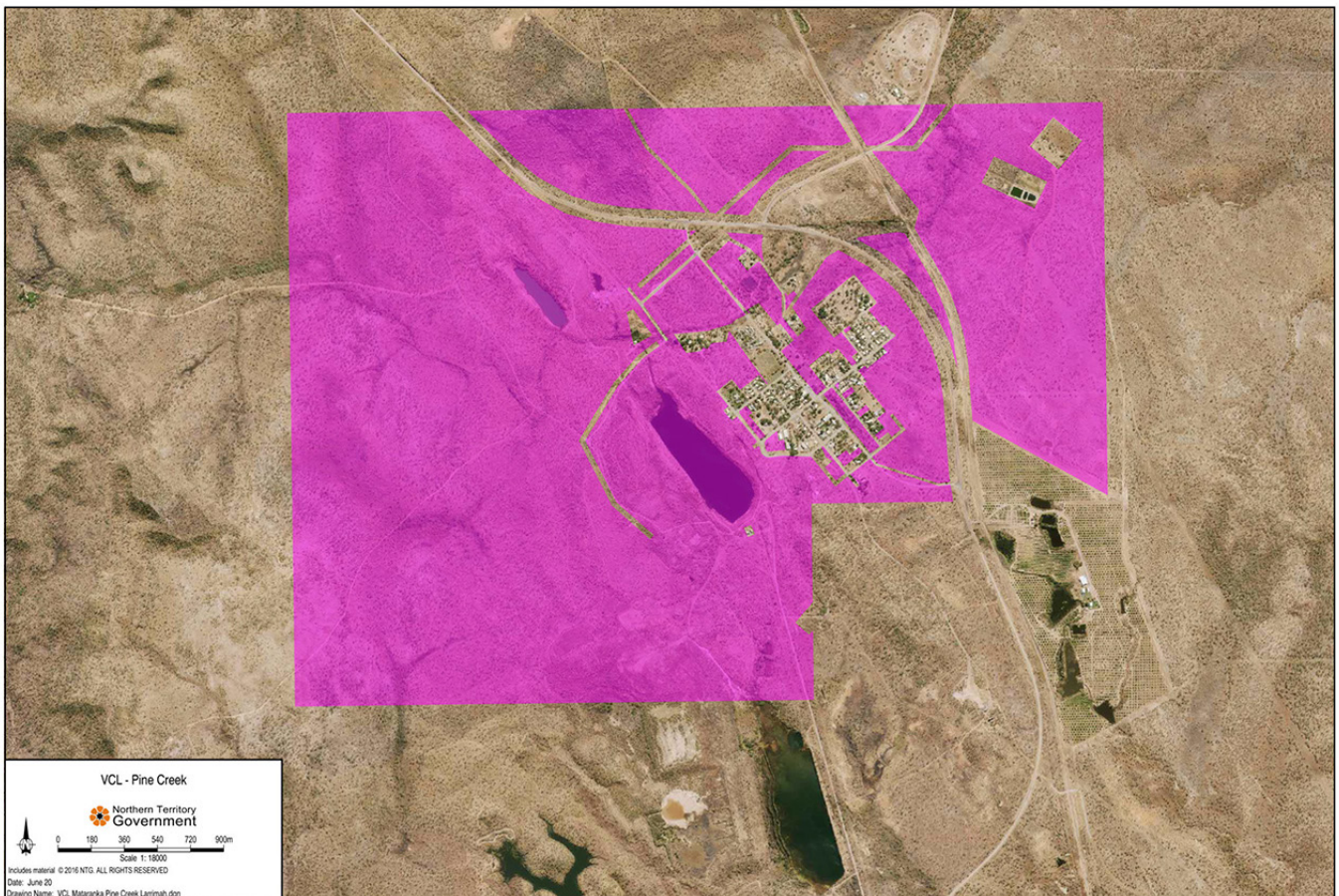


Figure 6 Vacant Crown Land in the Pine Creek area

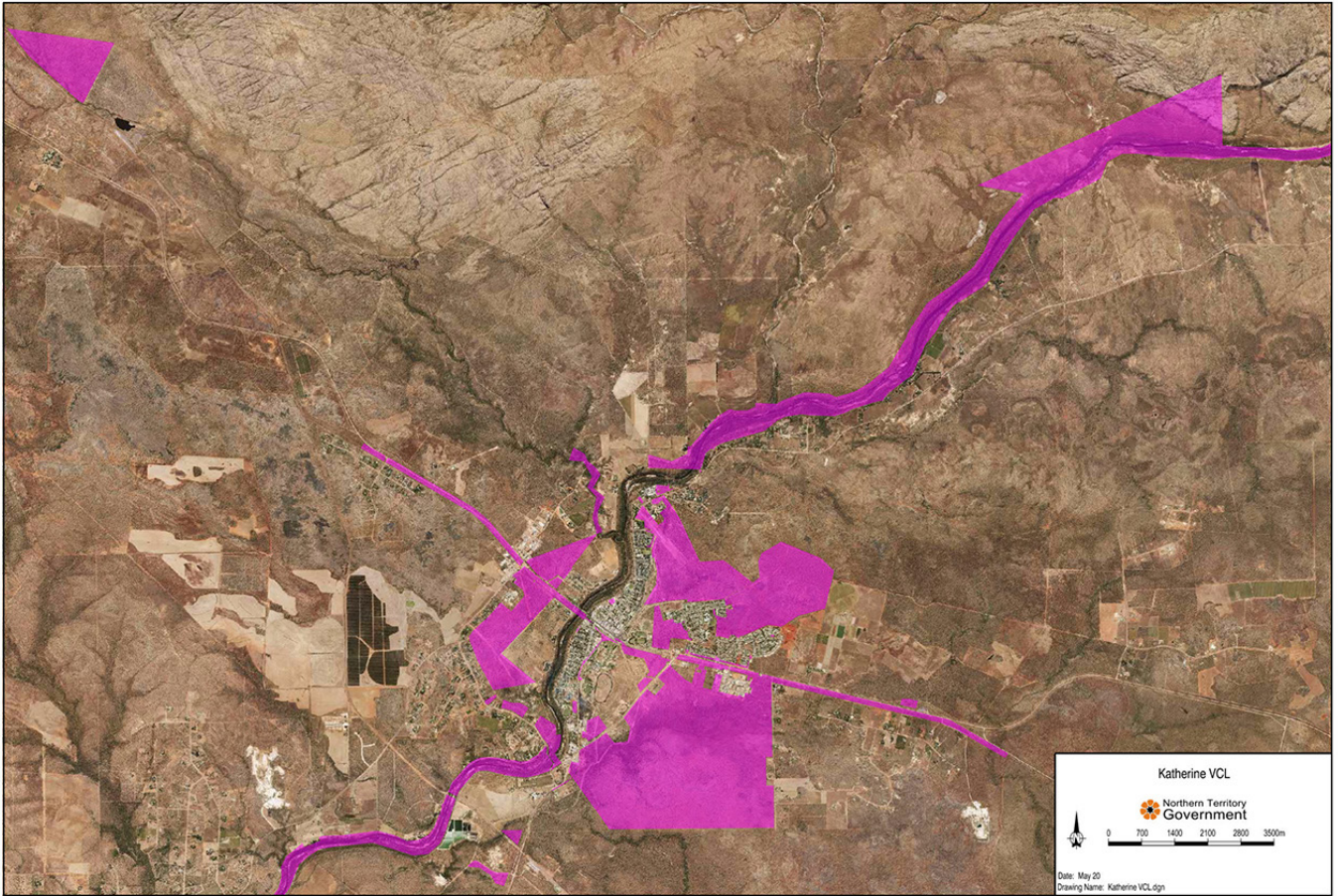


Figure 7 Vacant Crown Land in the Katherine area

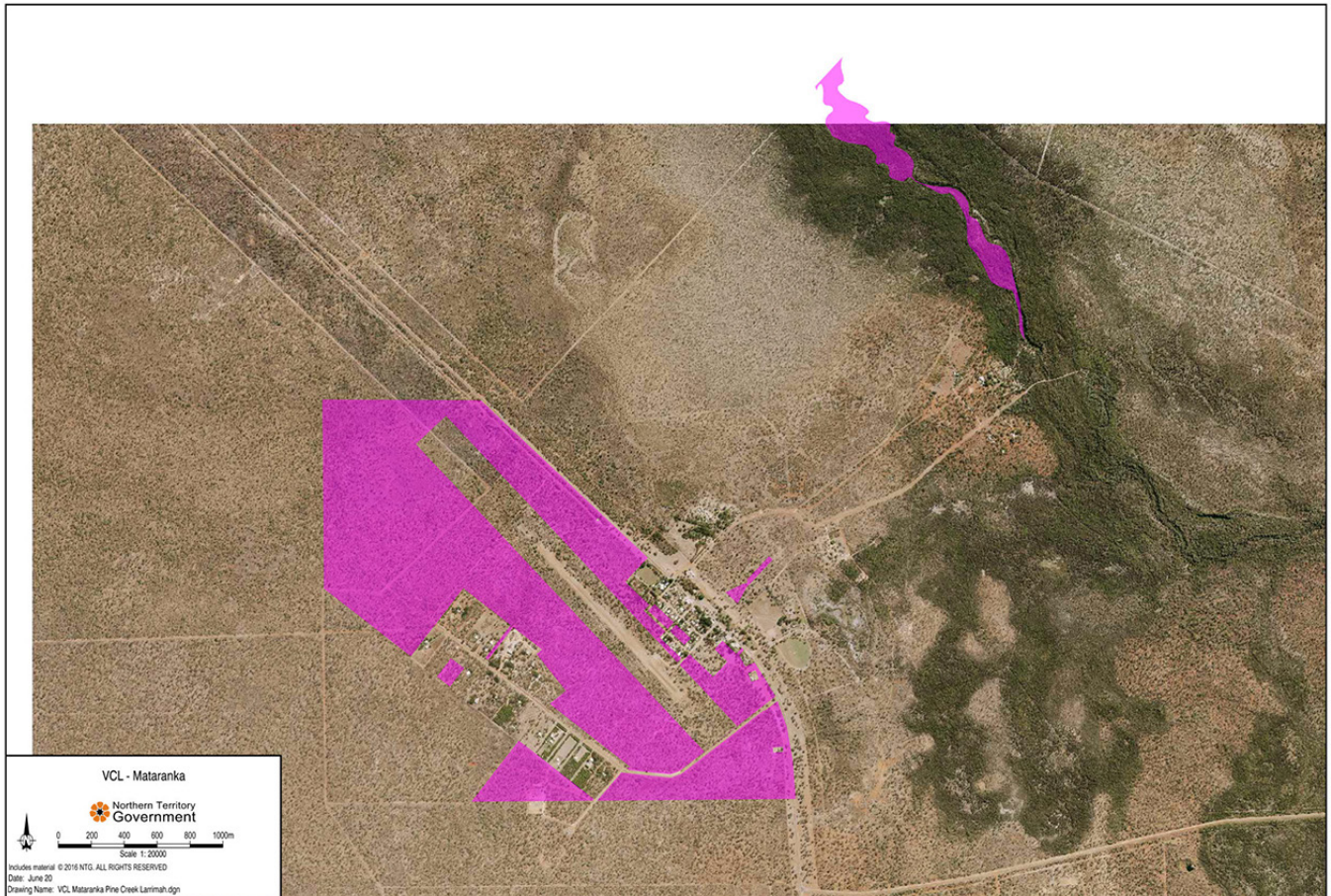


Figure 8 Vacant Crown Land in the Mataranka area

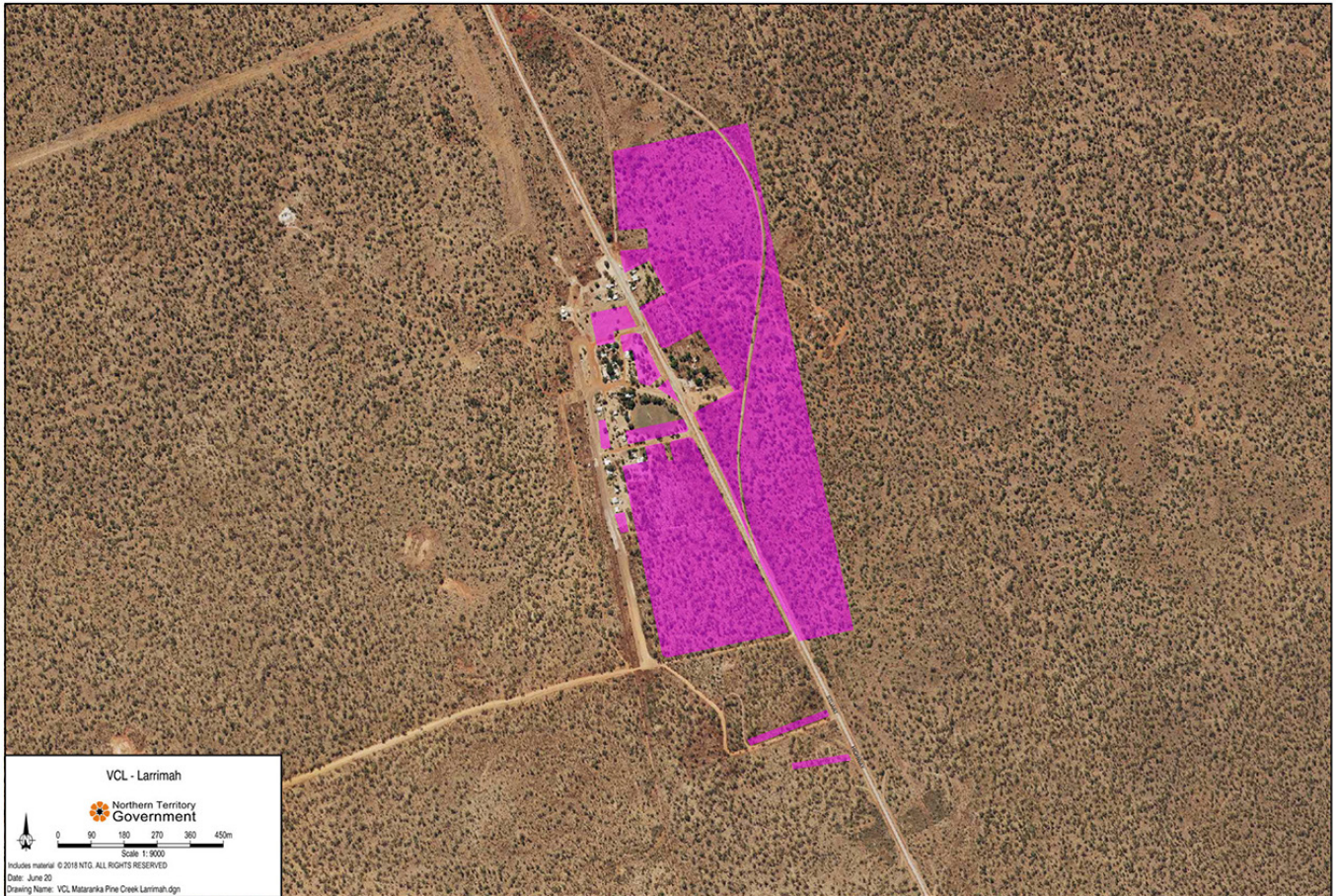


Figure 9 Vacant Crown Land in the Larrimah area

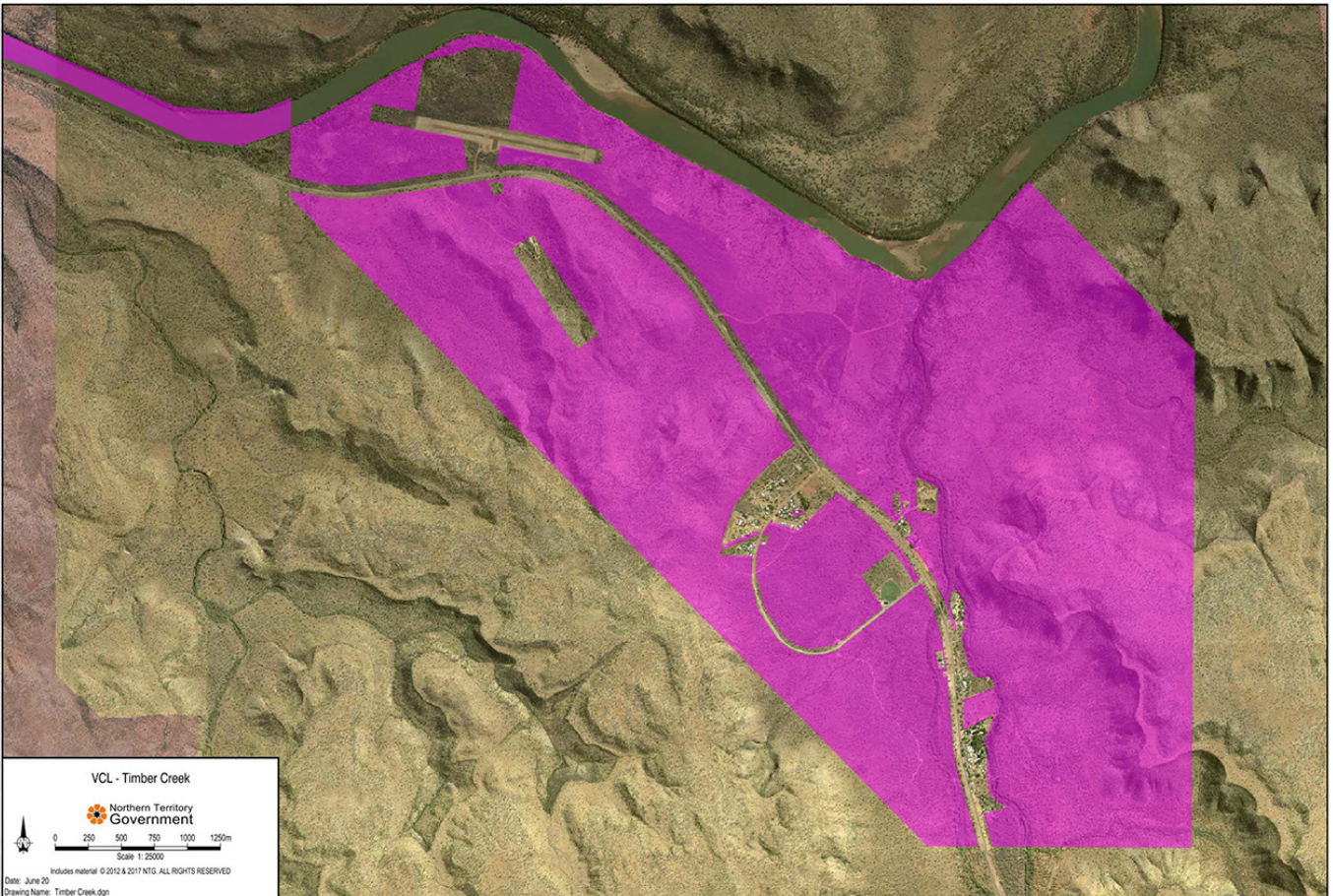


Figure 10 Vacant Crown Land in the Timber Creek area

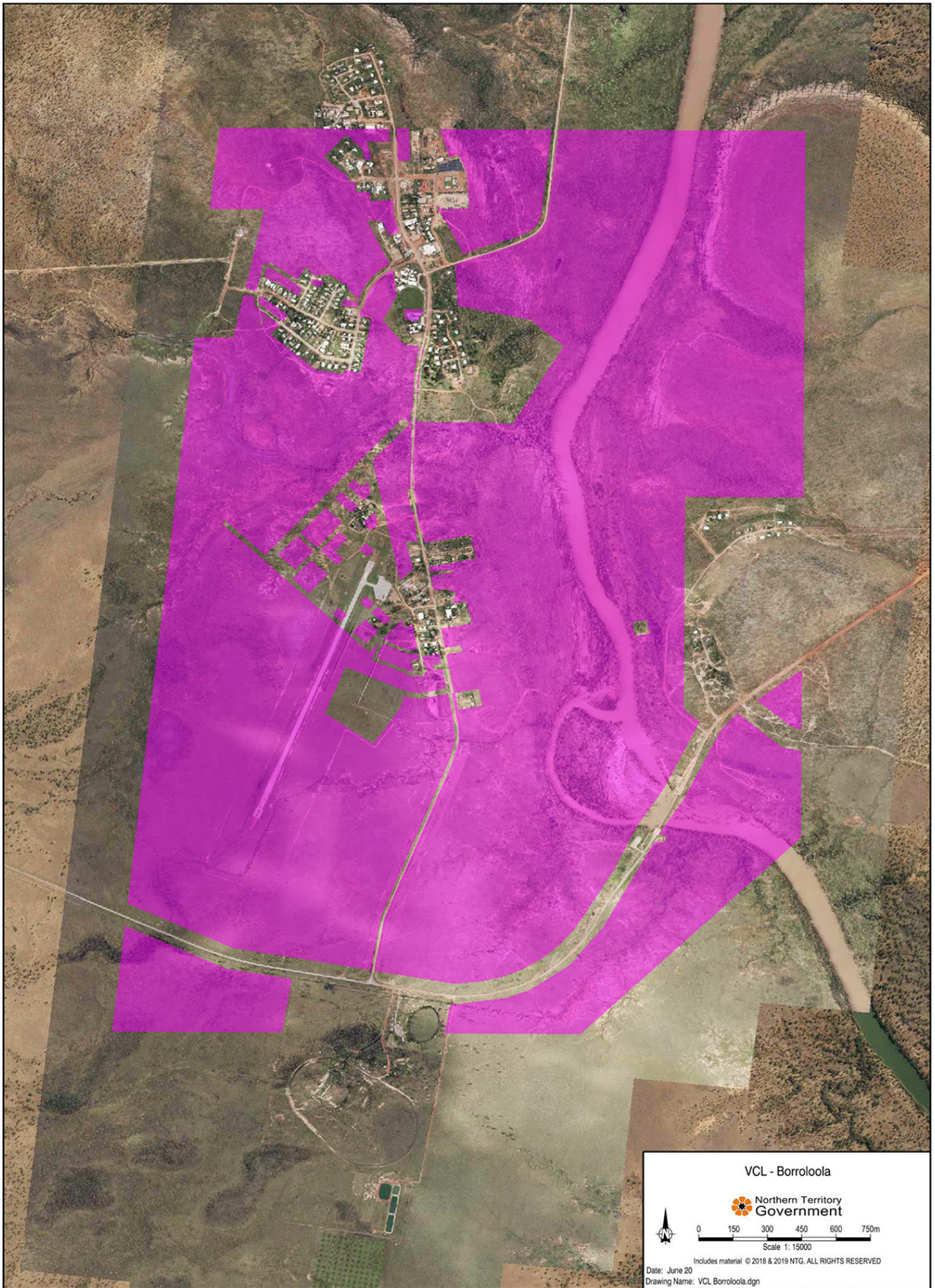


Figure 11 Vacant Crown Land in the Borroloola area

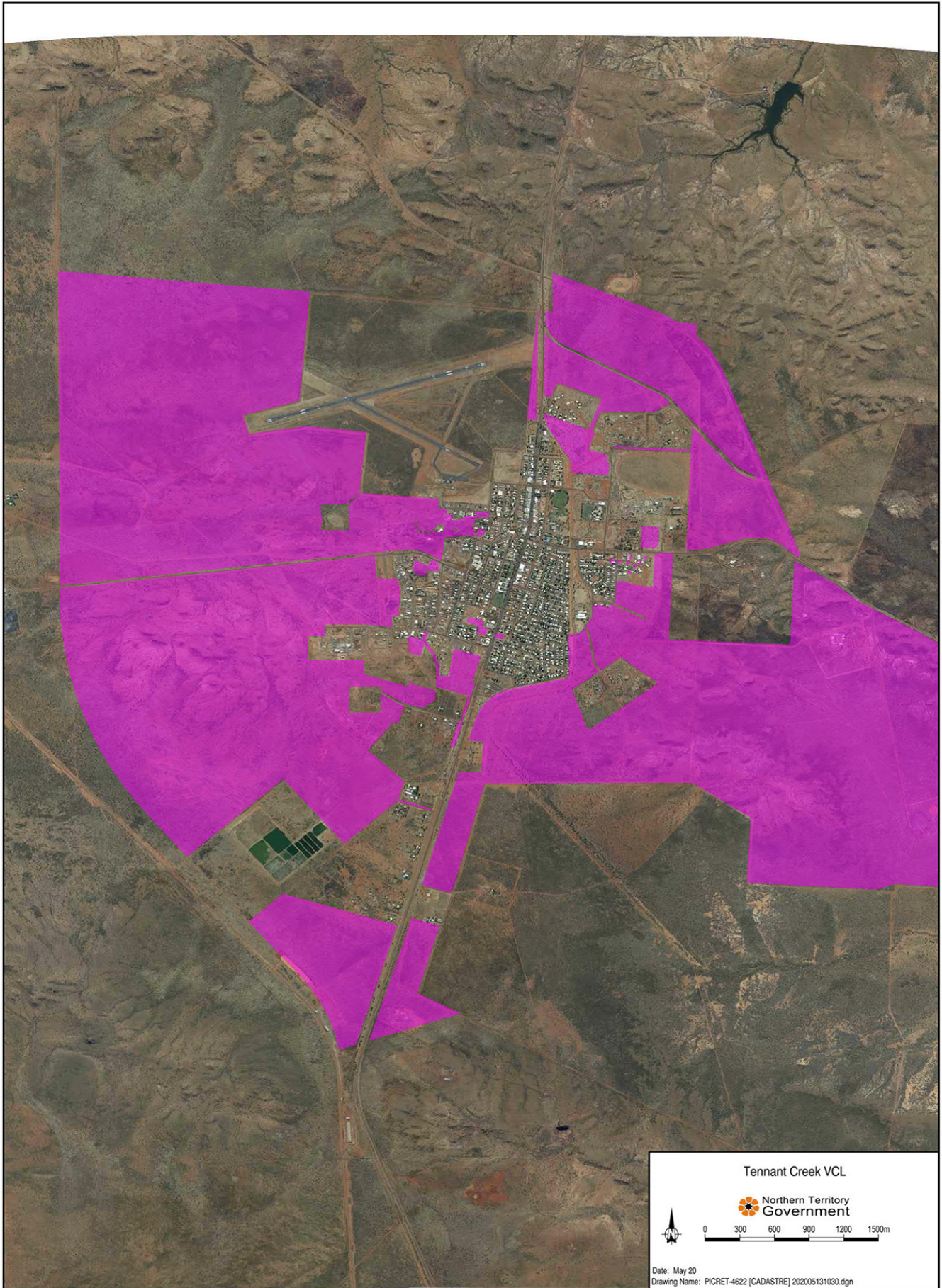


Figure 12 Vacant Crown Land in the Tennant Creek area



Figure 13 Vacant Crown Land in the Alice Springs area

## 1.2. Weeds overview

Weeds pose a threat to the persistence and diversity of natural ecosystems, agricultural productivity, public amenity, human safety, property and other land management priorities. The Centre for Invasive Species Solutions recently estimated the annual costs of weeds to the Australian economy to be \$5 Billion, having increased by more than 20% in the last 14 years (McLeod, 2018).

Considerable resources are committed by the NT and Commonwealth Governments (including the Crown Land Estate) and private land managers toward weed management each year in the NT. Annual expenditure on weed control programs on NT Indigenous lands alone is an average of \$34.52M (McLeod, 2018).

In the NT, weeds may cause impacts associated with:

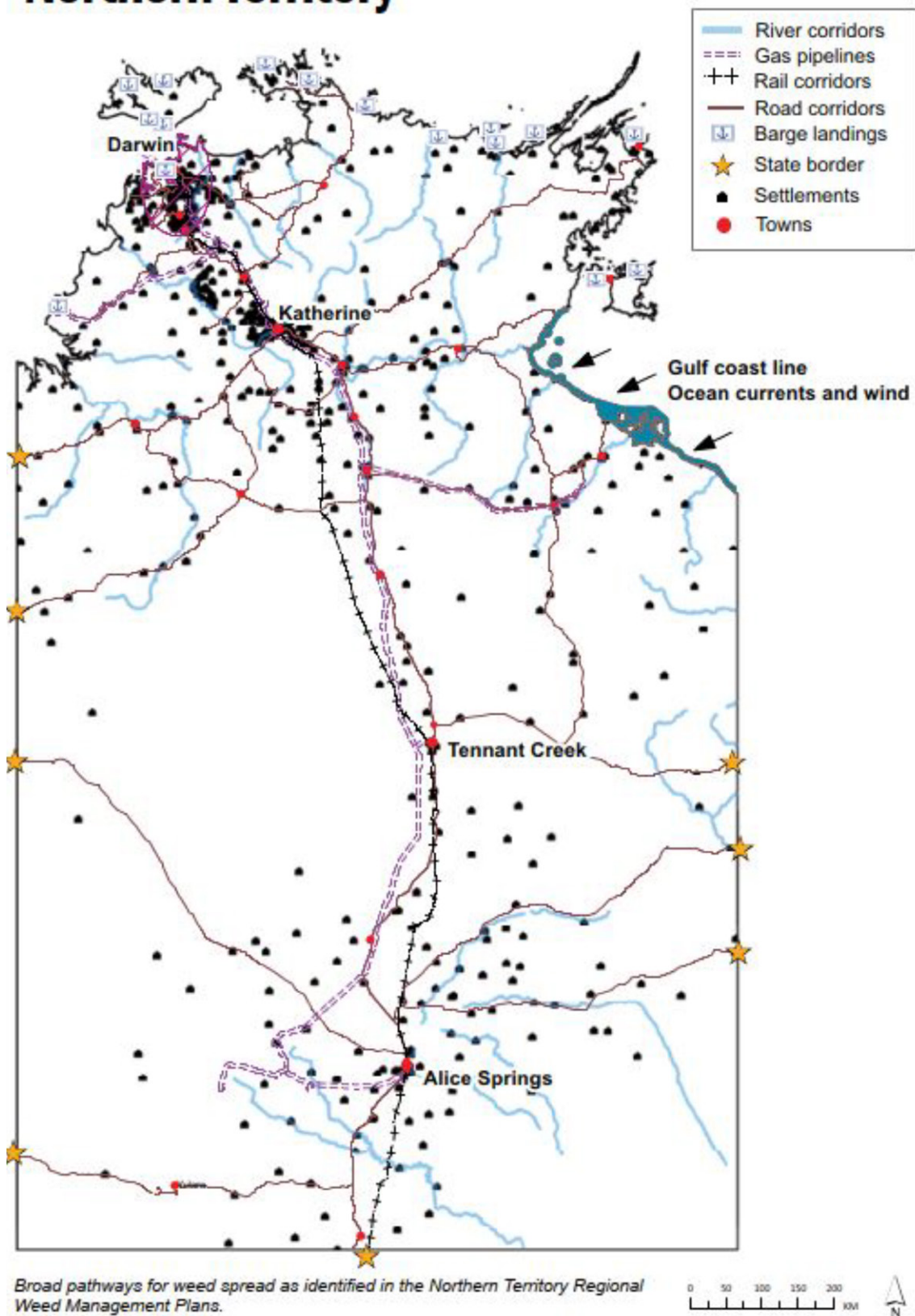
- modification of fire regimes with resulting impacts on public safety, property, carbon emissions, and soil fertility,
- reduction of the aesthetic values of natural areas,
- competition with native plants including bush tucker,
- modification of native fauna habitats,
- reduction of productivity of pastoral land,
- impacts on sacred sites,
- changes in hydrology, water quality and aquatic habitats,
- impacts to human health, and
- reduction of recreational values of terrestrial resources and waterways.

The introduction of weeds can occur either accidentally or intentionally (intentional introductions may be based on economic, agricultural or aesthetic values of plant species). Once introduced, weeds spread can occur via natural or anthropogenic mechanisms including wind, water, domestic, native or feral fauna, or through movement of vehicles, soil, agricultural material or other equipment. Priority pathways for weed spread in the NT identified by the NT Government's Weed Management Branch (WMB) and their associated mechanisms are listed in Table 1 (WMB 2013, WMB 2015 a, b, c). The occurrence of these pathways across the NT is illustrated in Figure 14. Given the number and geographic spread of VCL parcels in the NT, VCLs are vulnerable to introduction and spread of weeds through to most of these pathways and mechanisms. In addition, escape from cultivation in proximal blocks, and uncontrolled access to VCL for recreational purposes and illegal dumping (particularly of garden waste) has the potential to introduce and spread weeds.

**Table 1** Priority pathways for weed spread

Pathway of spread	Example mechanisms of spread along priority pathways
Barge landings	Shipping cargo to remote locations
Coast lines	Ocean current and wind
Commercial activities	Movement of contaminated material, e.g. fodder, livestock, sand and gravel, nursery and garden products
Infrastructure corridors (gas pipeline, rail, power lines, roads and tracks)	Construction and maintenance activities
Mining, extraction & exploration areas	Construction and maintenance of mines and access roads, including land clearing, slashing and grading
Pastoral holdings	Point of delivery for livestock and hay
River corridors	Livestock, feral and native animal movements, wind, water, recreation activities
Road network, Stock routes	Construction and maintenance, such as slashing and grading, 4WD tourism, wind, livestock, feral and native animal movements
Outstations	Movement of vehicles and equipment

# Pathways of weed spread in the Northern Territory



Broad pathways for weed spread as identified in the Northern Territory Regional Weed Management Plans.

Figure 14 Pathways of weed spread in the Northern Territory  
Source: Weed Management Branch (2015d)

## 2. Applicable legislation

### 2.1. Northern Territory Weeds Management Act

Weeds in the NT are primarily managed under the Weeds Management Act 2001 (the Act) which is administered by DENR.

The Act provides the legislative framework for management requirements and restrictions in relation to declared weeds in the NT. There are currently 190 declared weeds (Appendix A) which are classified as:

- Class A – to be eradicated (44 species/genera)
- Class B – Growth and spread to be prevented (38 species/genera)
- Class C – Not to be introduced to the Territory (108 species/genera)

All Class A and Class B weeds are also Class C weeds. The WMA prohibits:

- bringing a declared weed into the NT
- spreading or scattering a declared weed
- selling, purchasing, or offering to sell or purchase a declared weed
- hire of any equipment or other item that contains or carries a declared weed
- storage, growth or use of a declared weed
- transport or carriage of a declared weed
- cutting declared weeds for fodder or mulch
- moving or driving an animal or vehicle on a road or to another person's land if you know it contains or carries a declared weed
- failure to comply with a quarantine notice regarding weeds.

In addition, under the WMA land managers, including the CLE, must:

- take reasonable measures to prevent the land becoming infested with a declared weed
- take reasonable measures to prevent a declared weed spreading to other land
- follow a statutory weed management plan (WMP)
- where a declared weed has not previously been known on the land, to notify DENR in a timely manner.

The complete Act and the Weeds Management Regulations 2006 can be viewed at <http://www.nt.gov.au/dcm/legislation/current.html>

### 2.2. Commonwealth Environment Protection and Biodiversity Conservation Act

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. The EPBC Act includes provisions for the listing of Key Threatening Processes, including weeds. A threatening process can be considered a Key Threatening Processes if:

- it could cause a native species or an ecological community to become eligible for listing under the EPBC Act (in any category, other than conservation dependent); or
- it could cause a listed threatened species or a listed threatened ecological community to become eligible to be listed in another category representing a higher degree of endangerment; or
- it adversely affects 2 or more listed threatened species (other than conservation dependent species) or 2 or more listed threatened ecological communities.

It is important to note that listing of a Key Threatening Process does not regulate or prevent actions undertaken by property managers. Key Threatening Processes are not Matters of National Environmental Significance under the EPBC Act and do not trigger the Act. Listings are intended to raise awareness of how threats to biodiversity are

operating across Australia and assist with understanding and prioritising management, planning and research. Key Threatening Processes relevant to weeds in the NT include:

- Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants
- Invasion of northern Australia by Gamba Grass and other introduced grasses (this threat refers to Gamba Grass (*Andropogon gayanus*), Para Grass (*Urochloa mutica*), Olive Hymenachne (*Hymenachne amplexicaulis*), Perennial Mission Grass (*Cenchrus polystachios*) and Annual Mission Grass (*Pennisetum pedicellatus*))

The complete Act and the Environment Protection and Biodiversity Conservation Regulations 2000 can be viewed at <https://www.legislation.gov.au/>

### 3. Weed Management Resources

An overview of resources considered in the development of this Strategy is provided in Table 2.

**Table 2 Weed management resources**

Resources	Description
Australian Weeds Strategy 2017–2027 (Invasive Plants and Animals Committee 2017)	This strategy outlines the principles that underpin weed management in Australia and provides national guidance on best practice weed management.
NT Government regional weed management plans (WMPs) for Alice Springs, Katherine, Darwin and the Barkly Region	The regional WMPs prepared by DENR form part of the NT wide strategic approach to weed management and focus on local weed management priorities. These plans support the implementation of individual statutory WMPs and provide direction for managing weed threats.
National Environmental Alert List (the Alert List)	The list includes 28 weed species that are in the early stages of establishment and have the potential to become a significant threat to biodiversity if they are not managed.
Northern Territory Weed Management Handbook (2018)	The NT Weed management handbook provides a practical guide for weed control in the NT. The handbook includes specific detailed on control options for a number of species.
Northern Territory Weed Risk Management System	The Northern Territory Government uses the Northern Territory Weed Risk Management System (Setterfield et al 2010) to identify and prioritise plants to be considered for declaration as weeds in accordance with the Act and to determine the appropriate management response for those plants. Detailed technical reports on assessments are available for Athel pine, Brazilian pepper, Fountain grass, Leaf cactus, Parrots feather and Thatch grass.
NT Biosecurity Strategy 2016-2026	The NT Biosecurity Strategy outlines actions targeted toward ensuring plant and animal pests and diseases and their impacts can be prevented, eliminated or managed. The strategy contains a commitment to ensure weeds are detected shortly after entry into the Northern Territory (or before they become established and spread) to enable successful eradication.
Statutory WMPs under the WMA	WMPs are statutory documents that set out the legal obligations of landowners and occupiers to manage the highest risk declared species. There are currently 10 plans in force including those for Athel Pine, Bellyache Bush, Cabomba, Chinee Apple, Gamba Grass, Grader Grass, Mesquite, Mimosa, Neem, and Prickly Acacia.

### 3.1. Vacant Crown Land Regional Weed Management Plans

The NT encompasses 1.4 million km<sup>2</sup> ranging from the wet-dry tropics of the north to the arid and semi-arid centre presenting a number of challenges for strategic weed management across the NT. To implement weed management according to regional priorities, DENR divides management of weeds into four regions: Alice Springs, Darwin, Katherine and Tennant Creek (Figure 15), each of which has a targeted regional management plan (WMB 2013, WMB 2015 a, b, c). However, it should be noted that the plans are currently under review. VCL weed control is similarly managed, with three management regions (combining Tennant Creek and Alice Springs into the Central Region of VCL). DIPL's weed management plans for the regions were developed in 2015 and are due for review in 2020. Any review of WMPs is guided by this Strategy and typically addresses:

- Regional priority species
- Best practice weed management for the region and species of concern, including appropriate data collection
- Actions to achieve regional objectives

Monitoring and review, including weed management contractor performance evaluation.

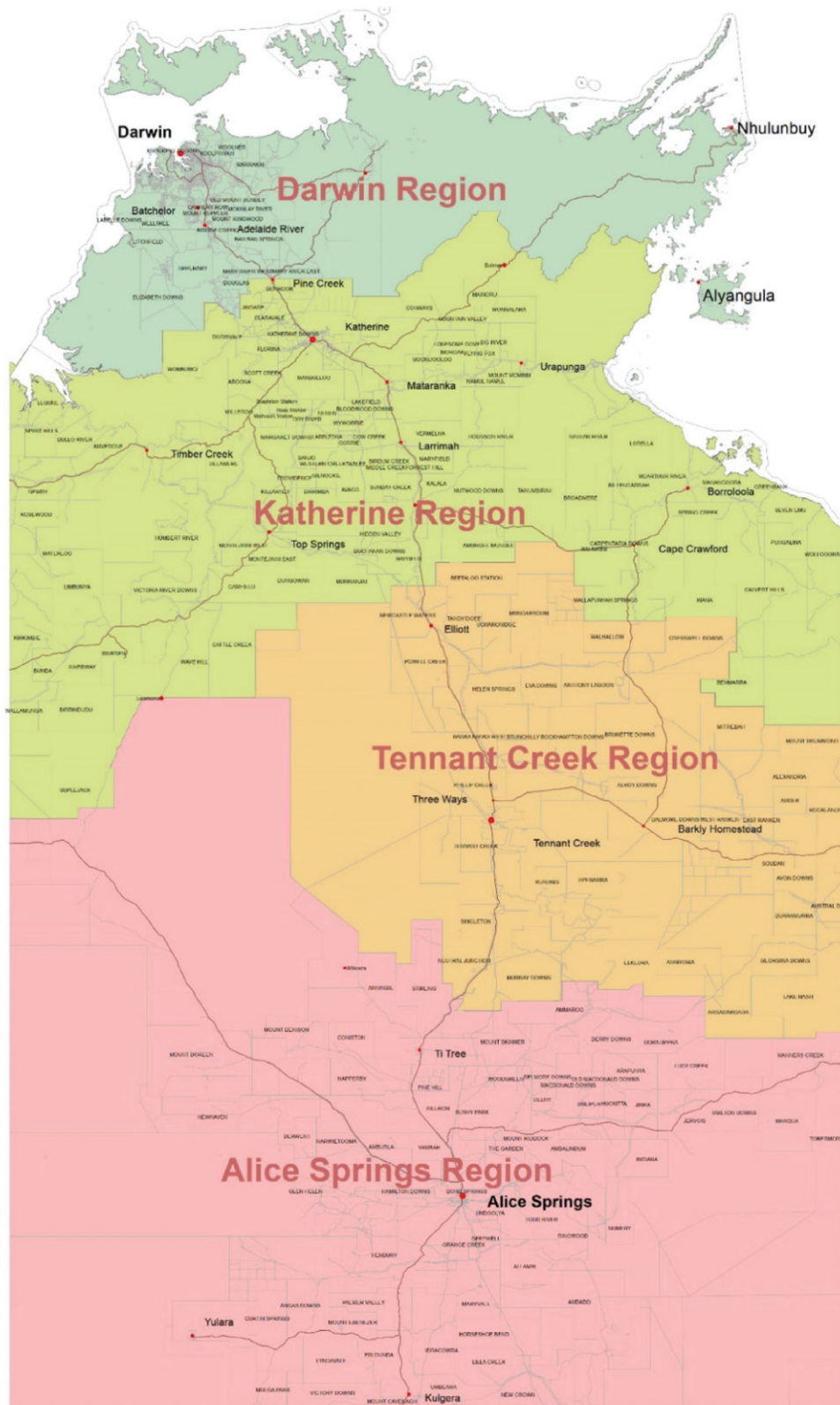


Figure 15 Weed management branch weed management regions

Source: [https://nt.gov.au/\\_data/assets/pdf\\_file/0008/193562/weed-management-zones-map.pdf](https://nt.gov.au/_data/assets/pdf_file/0008/193562/weed-management-zones-map.pdf)

## 4. Principles of Weed Management

The following section introduces the principles of weed management that guides the development of the Regional Weed Management Plans which in turn provides guidance for the implementation of each of these principles in relation to the environmental conditions and weeds of concern for each region.

### 4.1. Weed Management Objectives

The generalised weed invasion curve (Figure 16) shows the invasion process for weeds from prior to their arrival through to widespread establishment. The curve indicates that the goal of control actions varies across time, and that the effort and resources required to control a weeds rises with time and area occupied. It also demonstrates that efforts to control new and emerging weeds must be partnered with strategies to minimise the current impact posed by widespread weeds.

Source: Invasive Plants and Animals Committee (2017). Australia Weeds Strategy 2017 – 2027. Commonwealth of Australia

The appropriate objective for weed management varies depending on weed infestation status, and may include:

- **Prevention** – new infestations of a species are kept out of the area of concern.
- **Eradication** – all infestations of a species in the area of concern are eradicated.
- **Containment** – small outlier infestations in the area of concern are eradicated. Larger core infestations are reduced where possible, and are prevented from spreading.
- **Asset-based protection** – widespread and abundant species are managed in the area of concern to minimise their impact on particular assets.

These approaches should be used in combination (potentially for multiple weed species) as appropriate at each location.

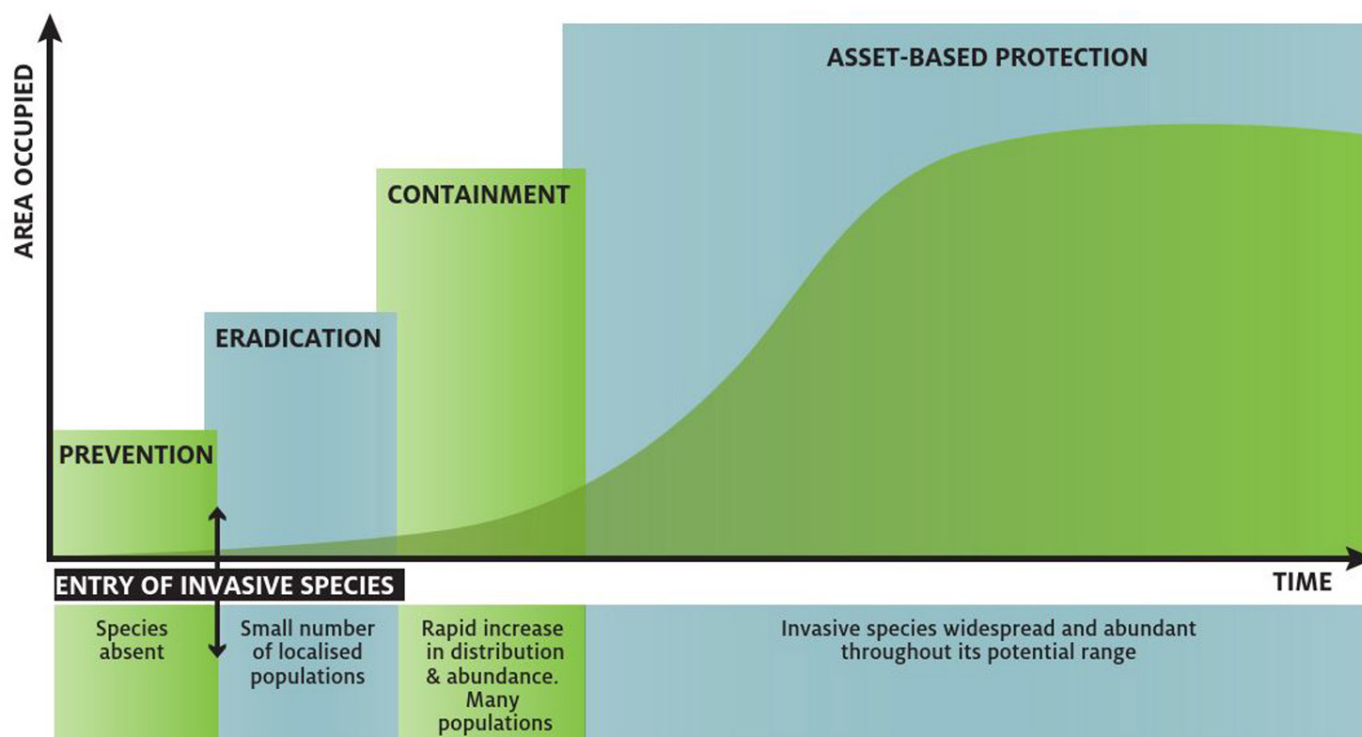


Figure 16 Generalised weed invasion curve

## 4.2. Integrated Weed Management

Integrated weed management relies on using a combination of weed management techniques for long term control. Briefly, weed control methods include:

- Physical control – removal of weeds by physical or mechanical means (e.g. bulldozing, burning, grazing, hand removal)
- Chemical control – removal of weeds with herbicide (e.g. foliar or basal bark spraying, cut stump application)
- Cultural control – largely involves manipulating farming practices to suppress weed growth and production (e.g. growth of cover crops)
- Biological Control – Using a deliberately released herbivore or pathogen that has been carefully tested to ensure that there is no impact on non-target species, to reduce the reproduction, growth and spread of an introduced weed.

Weed management should also be closely linked to broader natural resource management at the property and catchment level. Weed spread and germination can be enhanced in degraded areas, such as those impacted by erosion, domestic or feral animals. Good land management, soil conservation and rehabilitation approaches are particularly important where repeated treatment of weeds using other methods significantly reduces ground cover.

Appropriate weed control methods depend on the species' biology and ecology and the characteristic of the infestation, and not all methods will be applicable to VCL or to all Regions within the NT. However, integrated weed control approaches should be used where suitable.

## 4.3. Stakeholder Engagement

Successful weed management outcomes on a broad scale are dependent on coordinated action by all stakeholders. To ensure optimal outcomes and to develop programs that are consistent with regional activities and land management programs, the CLE needs to work with key stakeholders including:

- The NT Government
- Local government
- Surrounding land managers (local, NT and Commonwealth government, and non-government)
- Linear infrastructure managers (e.g. road, rail, electricity, pipeline corridors)
- Weed control suppliers
- Recreational and other users of VCL
- Community and special interest groups
- Bushfires NT
- Indigenous organisations and land councils
- Research organisations

Engagement with stakeholders by the CLE will allow opportunities to work together for coordinated weed control to be identified. It is also important for the CLE to effectively inform stakeholders of the work being done to control weeds on VCL.

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## 4.4. Adaptive Management

Adaptive management is the process of implementing management actions, evaluating their outcomes and adapting future management taking that information into account, summarised as the plan-do-learn cycle. This allows ongoing optimisation of management in response to on-ground outcomes and changes in context. Adaptive management includes the flexibility to change weed management priorities depending on emerging threats and opportunities (see below).

## 4.5. Prioritisation of Weeds

Weeds are frequently prioritised to maximise the impact of control efforts where budgets and resources are limited. Weed prioritisation identifies species that are of a priority concern because of their invasiveness and threat to natural ecosystems, biodiversity and agricultural land or safety or economic threats. Criteria for priority weeds in the NT may include:

- Declaration under the WMA
- Listing as a Key Threatening Process under the EPBC Act,
- Listing as an Alert weed
- Presence of a Statutory WMP
- Advice from DENR
- Potential to create a risk to public safety and property
- Local expert opinion

In combination, consideration of these factors is used to identify regionally appropriate priorities, which may not be specifically listed under the Act. For example, Buffel grass (*Cenchrus ciliaris*), is not a declared weed (and therefore has no statutory management requirements) and is used as forage in a pastoral context, but is a key weed of concern in the Central Weed Management Region, as it creates a risk to public safety and property by generating a large volume of dry matter which increases fire risk and severity.

An additional criterion for prioritisation of weeds is 'achievability'. In consideration of the weed growth curve shown in Figure 16, an increase in spread may be used as a surrogate for an increase in cost and effort, so early detection and eradication of an emerging weed is both cheaper and more achievable than a delayed response once the abundance and distribution of the weed increases. This may mean that the highest priority weed at a particular time may be a new emerging weed that is not yet a declared species but is predicted to become a significant weed if left uncontrolled.

Priority weeds identified for VCL using the weed risk management system, comment and recommendations from the weed risk assessment team, principal and regional weed officers and the Northern Territory Weed Advisory Committee is presented in Table 3 (DLP 2010). Photos of each species (sourced from DENR resources) are provided below.

Common Name	Scientific name	Listings	Central	Darwin	Katherine
Athel pine	<i>Tamarix aphylla</i>	Class A, B*, C, Statutory weed management plan	✓		
Bathurst burr	<i>Xanthium spinosum</i>	Class B, C	✓		
Bellyache bush	<i>Jatropha gossypifolia</i>	Class A, B*, C, Statutory weed management plan	✓	✓	✓
Buffel grass	<i>Cenchrus ciliaris</i>		✓		
Cabomba	<i>Cabomba caroliniana</i>	Class A, C, Statutory weed management plan	✓	✓	✓
Chinee apple	<i>Ziziphus mauritiana</i>	Class A, C, Statutory weed management plan		✓	✓
Coffee senna	<i>Senna obtusifolia</i>	Class B, C	✓		
Devil's claw	<i>Martynia annua</i>	Class A, C			✓
Gamba Grass	<i>Andropogon gayanus</i>	Class A, B*, C, Key threatening Process, Statutory weed management plan		✓	✓
Grader grass	<i>Themeda quadrivalvis</i>	Class B, C, Statutory weed management plan		✓	✓
Lantana	<i>Lantana camara</i>	Class B, C		✓	✓
Mesquite	<i>Prosopis spp.</i>	Class A, C, Statutory weed management plan	✓		✓
Mimosa	<i>Mimosa pigra</i>	Class A, B*, C, Statutory weed management plan		✓	✓
Mission grass (Perennial)	<i>Pennisetum polystachion</i>	Class B, C Key threatening process	✓	✓	
Neem	<i>Azadirachta indica</i>	Class B, C, Statutory weed management plan		✓	✓
Neurada procumbens	<i>Neurada procumbens</i>		✓		
Noogoora burr	<i>Xanthium occidentale</i>	Class B, C	✓	✓	✓
Olive hymenachne	<i>Hymenachne amplexicaulis</i>	Class B, C, Key threatening process		✓	✓
Ornamental rubber vine	<i>Cryptostegia spp.</i>	Class A, C			✓
Parkinsonia	<i>Parkinsonia aculeata</i>	Class B, C	✓		✓
Parthenium	<i>Parthenium hysterophorus</i>	Class A, C			✓
Prickly acacia	<i>Vachellia nilotica</i>	Class A, C			✓
Prickly pear	<i>Opuntia spp</i>	Class A	✓		
Rope cactus	<i>Austrocylindropuntia spp, Cylindropuntia</i>	Class A	✓		
Rubber bush	<i>Calotropis procera</i>	Class B, C	✓		
Saffron thistle	<i>Carthamus lanatus</i>	Class B, C	✓		
Snake weed	<i>Stachytarpheta spp</i>	Class B, C			✓
Thatch grass	<i>Hyparrhenia rufus</i>	Class A, C			✓



*Athel Pine*



*Bathurst Burr*



*Bellyache Bush*



*Buffel Grass*



*Cabomba*



*Chinese Apple*



*Coffee Senna*



*Devils Claw*



*Gamba Grass*



*Grader Grass*



*Lantana*



*Mesquite*



*Mimosa*



*Mission Grass (perennial, Greg Calvert)*



*Neem*



*Neurada procumbens*



*Noogoora burr*



*Olive hymenachne*



*Ornamental rubber vine*



*Parkinsonia*



*Parthenium*



*Prickly Acacia*



*Prickly pear*



*Rope cactus*



*Rubber Bush*



*Saffron Thistle*



*Snake weed*



*Thatch grass*

#### 4.6. Prioritisation of Land Parcels

Weed control of VCL is carried out in strategic locations across the NT, with the parcels that are included in the weed control program monitored and adjusted as required in consultation with DENR's Regional Weed management reference groups. Approximately 306 Crown land parcels are currently scheduled for weed treatment. Including 92 parcels in the Darwin Region (reduced from the 122 identified in the 2010 weed management strategy in 2016), 100 parcels in the Katherine Region and 114 parcels with problematic Gamba grass that were identified in 2017 by DENR for a program funded by a one off economic stimulus grant.

## 5. Management Objectives and Action

The management objectives for VCL proposed here and based on best practise approaches and are ultimately targeted toward achieving compliance with the WMA. The objectives include:

- Prevent new weed infestations and manage existing weed infestations
- Monitor, report and act on weed management program outcomes
- Consult and inform stakeholders
- Leverage opportunities to contribute to existing programs.

### 5.1. Objective 1: Prevent new weed infestations and manage existing weed infestations

Managing current declared weed infestations is a requirement under the Act. Preventing weed incursions into previously clean areas is the most cost-effective method of weed control, and prevention of spread into previously treated areas ensures that re-infestation, or infestation with new species does not occur. Where weeds have established, ongoing management using best practice approaches is required.

Management actions to maximise outcomes will be documented in the Regional WMPs and should be informed by current understanding of the status of weed infestations, regionally priorities and subject to continual improvement.

**Table 4 Actions to achieve objective 1  
'Prevent new weed infestations and manage existing weed infestations'**

Goal	Action	Timing	Outcome/Output
Understand location and severity of infestations	Undertake weed surveys on all VCL	2020-2025	Weeds on Crown Land included in DENR's spatial database. Early detection of emerging weed threats
Ensure weed management activities do not spread weeds	Include hygiene procedures in VCL weed management contracts	At contract renewal	Weed control contractors are contractually obligated to use weed hygiene procedures
	Audit contractor compliance with hygiene procedures	Once annually during weed control activities	Evidence that contractors are implementing weed hygiene procedures
Ensure other activities, including fire management, do not spread weeds	Include weed hygiene procedures in all VCL contracts	At contract renewal	All contractors are contractually obligated to use weed hygiene procedures
Ensure best practice integrated weed management approaches are being used	Continue liaison with DENR to ensure current best practice weed control methods are included in WMPs	Ongoing	WMPs are updated with current best practice weed control methods, WMPs are implemented
	Develop and maintain relationships with research organisations	Ongoing	
Identify emerging threats in a timely manner	Continue liaison with Weeds Branch to identify emerging threats and update operational plans as needed	Ongoing	Emerging weed management incorporated into WMPs in a timely manner

## 5.2. Objective 2: Monitor, report and act on weed management program outcomes

Monitoring and reporting on weed management programs provides information to ensure that management activities are being enacted as prescribed, and they are having the desired outcomes, and to provide transparency to stakeholders. Acting on the outcomes of monitoring allows for continuous improvement

**Table 5** Actions to achieve objective 2 'Monitor, report and act on weed management program outcomes'

Goal	Action	Timing	Outcome/Output
Report on weed management conducted on VCL	Prepare annual report documenting actions undertaken and monitoring outcomes	Annually at the end of weed management season for each region	Annual VCL Weed Management Report for each Region
Monitor and report on weed control success	Undertake weed surveys of parcels subject to weed control (target 30% of properties annually)	Annually following management actions	
Implement lessons learnt	Modify WMP with findings of monitoring	Annually	Updated WMP for each region

## 5.3. Objective 3: Consult and inform stakeholders

Engaging stakeholders in weed management planning will allow them to take responsibility and ownership of managing the weeds in their jurisdiction, and to ensure they share a commitment to undertaking weed management in a strategic and coordinated manner. Actions for engaging with stakeholders are outlined in Table 5 below.

**Table 6** Actions to achieve objective 5 'Consult and inform stakeholders'

Goal	Action	Timing	Outcome/Output
Involve stakeholders in weed management planning	Continue participation in DENR's Regional Weed management reference groups	Ongoing	Participation in reference groups
Respond to stakeholder concerns	Develop a process to validate and respond to community complaints, using a single point of contact	2020	Complaints management process
Increase public awareness of CLE's commitment to weed management on VCL	Operational signage for contractors to be used during weed control activities	2020/2021 weed management season	Signage used for weed control activities in urban and peri-urban areas
	Site signage increasing awareness of weed control issues at heavily used sites	Q3 2020	Signage at frequently accessed sites
	Create a weeds section of the DIPL website	2020	Website documenting the CLE's weed management priorities and activity on VCL
	Publish annual weed management report	Annual	Annual VCL weed management report
	Contribute to DENR's weed related communications (e.g., 'Weed all about it' newsletter, Facebook)	Twice annually	VCL weed management column in DENR newsletter, VCL posts on DENR social media

## 5.4. Objective 4: Leverage opportunities to contribute to existing programs

The best outcomes of CLE weed management will be achieved when weed control is coordinated between stakeholders. Leveraging opportunities to work with DENR, to support community and interest group initiatives, and to facilitate research programs will maximise the effectiveness of VCL management activities.

**Table 7** Actions to achieve objective 5 'Leverage opportunities to contribute to existing programs'

Goal	Action	Timing	Outcome/Output
Participate in regional weed control programs where present	Continue liaison with DENR to identify opportunities for regional scale weed management projects	Ongoing	CLE participation in regional weed management programs
	Develop and maintain relationships with community groups	Ongoing	
	Identify and collaborate with neighbouring property holders who would undertake activities on VCL if supported (e.g., if provided with herbicide)	Prior to 2020/2021 weed management season	
Facilitate research programs on VCL	Develop and maintain relationships with research organisations	Ongoing	CLE participation in weed management research programs

## 6. Evaluation and review

This strategy comes into effect from May 2020. It is to be updated annually and reviewed within five years of this date and will cease ten years from this date, unless replaced by a revised plan.

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# Appendices

## Appendix 1 Declared weeds in the NT

A weed is broadly considered to be a plant that requires some form of action to reduce its negative effects on the economy, the environment and human health or amenity (Australian Weed Strategy 2017-27). Some weeds are declared and have legislative controls in place to assist with reducing their impacts.

In the Northern Territory, a declared weed is a species of plant identified for eradication, control, or prevention of entry in all or part of the Territory under section 7 of the Northern Territory [Weeds Management Act 2001](#) (the Act). The general duties and specific requirements relating to declared weeds are described in section 9 of the Act. Weed management plans apply to some declared weeds under section 10 of the Act and describe additional legal requirements for these species. A person may apply for a permit to use a declared weed under section 30 of the Act.

New declarations, and the area to which they apply, are published in the Northern Territory Government Gazette. A weed may be declared as:

- Class A To be eradicated**
- Class B Growth and spread to be prevented**
- Class C Not to be introduced to the Territory**

All Class A and Class B weeds are also considered to be Class C weeds.

The lists of weeds below are currently declared in the Northern Territory. The last change to the declared list occurred on 20 December 2017.

For information on how to identify and control weeds, including the use of common names for declared weeds, contact the Weed Management Branch on 08 8999 4567, visit [www.nt.gov.au/weeds](http://www.nt.gov.au/weeds), email [weedinfo@nt.gov.au](mailto:weedinfo@nt.gov.au).



Top left: Cabomba (Class A) is under eradication, Top right: Gamba grass fire (Class A and B)  
 Bottom left: Parthenium (Class A) is a biosecurity threat and is eradicated upon detection  
 Bottom right: Bellyache bush (Class A and B) affects both pastoral production and the environment

Declared Weeds in the Northern Territory

**Class A**

Area to which declaration applies is all of the Northern Territory unless otherwise indicated. Area restrictions refer to all parts of the Northern Territory. (Exceptions and clarifications to the species covered by the declaration are indicated by footnotes).

Botanical name	Common name	Area restriction	Code
<a href="#">Alternanthera philoxeroides</a>	Alligator weed		
<a href="#">Andropogon gyanus</a> *	Gamba grass*	Outside B zone	WMP
<a href="#">Annona glabra</a>	Pond apple		Alert
<a href="#">Asphodelus fistulosus</a>	Onion weed		
<a href="#">Austrocylindropuntia spp.</a>	Opuntoid cacti		
<a href="#">Barleria prionitis</a>	Barleria		
<a href="#">Cabomba spp.</a>	Cabomba		WMP / Alert
<a href="#">Chrysanthemoides monilifera</a>	Bitou bush, boneseed		
<a href="#">Cryptostegia spp.</a>	Rubber vines		Alert
<a href="#">Cylindropuntia spp.</a>	Opuntoid cacti, rope cacti		
<a href="#">Dalbergia sissoo</a>	Dalbergia	North of 18° S	
<a href="#">Datura ferox</a>	Longspine thornapple		
<a href="#">Dolichandra unguis-cati</a>	Cat's claw creeper		
Syn. <a href="#">Macfadyena unguis-cati</a>			
<a href="#">Echium plantagineum</a>	Paterson's curse		
<a href="#">Eichhornia crassipes</a>	Water hyacinth		Alert
<a href="#">Hyparrhenia rufa</a>	Thatch grass		
<a href="#">Jatropha curcas</a>	Physic nut		
<a href="#">Jatropha gossypifolia</a> *	Bellyache bush*	Outside B zone	WMP
<a href="#">Lycium ferocissimum</a>	African boxthorn		
<a href="#">Martynia annua</a>	Devil's claw		
<a href="#">Mimosa pigra</a> *	Mimosa*	Outside B zone	WMP
<a href="#">Myriophyllum aquaticum</a>	Parrot's feather		
<a href="#">Nassella neesiana</a>	Chilean needle grass		
<a href="#">Nassella tenuissima</a>	Mexican feather grass		
<a href="#">Nassella trichotoma</a>	Serrated tussock		
<a href="#">Neptunia plena</a>	Water mimosa		Alert
<a href="#">Neptunia oleraceae</a>	Water mimosa		
<a href="#">Opuntia spp.</a>	Prickly pears		
<a href="#">Parthenium hysterophorus</a>	Parthenium weed		Alert
<a href="#">Pereskia aculeata</a>	Leaf cactus		
<a href="#">Prosopis spp.</a>	Mesquite		WMP
<a href="#">Rubus fruticosus</a> agg.	Blackberry		
<a href="#">Sagittaria platyphylla</a>	Sagittaria		Alert
<a href="#">Salix spp.</a> <sup>1</sup>	Willows <sup>1</sup>		
<a href="#">Schinus terebinthifolius</a> *	Brazilian pepper*	North of 18° S	
<a href="#">Senegalia catechu</a>	Cutch tree		
Syn. <a href="#">Acacia catechu</a>			
<a href="#">Tamarix aphylla</a>	Athel pine	Outside B zone	WMP
<a href="#">Ulex europaeus</a>	Gorse		
<a href="#">Vachellia nilotica</a>	Prickly acacia		WMP
Syn. <a href="#">Acacia nilotica</a>			
<a href="#">Ziziphus mauritiana</a>	Chinee apple, Indian jujube		WMP

## Declared Weeds in the Northern Territory

## Class B

Area to which declaration applies is all of the Northern Territory unless otherwise indicated. Area restrictions apply to parts of the Northern Territory. (Exceptions and clarifications to the species covered by the declaration are indicated by footnotes).

Botanical name	Common name	Area restriction	Code
<i>Acanthospermum hispidum</i>	Star burr, goat's head		
<a href="#"><i>Alternanthera pungens</i></a>	Khaki weed		
<a href="#"><i>Andropogon gyanus</i>*</a>	Gamba grass*	Inside B zone	WMP
<a href="#"><i>Argemone ochroleuca</i></a>	Mexican poppy		
<a href="#"><i>Azadirachta indica</i></a>	Neem		WMP
<a href="#"><i>Calotropis procera</i>*</a>	Rubber bush*	South of 16°30' S	
<i>Carthamus lanatus</i>	Saffron thistle		
<i>Cenchrus echinatus</i>	Mossman River grass		
<a href="#"><i>Cenchrus polystachios</i></a>	Mission grass (perennial)		
Syn. <i>Pennisetum polystachion</i>			
<a href="#"><i>Cenchrus setaceus</i></a>	Fountain grass		
<i>Emex australis</i>	Spiny emex		
<a href="#"><i>Hymenachne amplexicaulis</i></a>	Olive hymenachne		
<i>Hyptis capitata</i>	Knob weed		
<a href="#"><i>Hyptis suaveolens</i></a>	Hyptis		
<a href="#"><i>Jatropha gossypifolia</i>*</a>	Bellyache bush*	Inside B zone	WMP
<a href="#"><i>Lantana camara</i></a>	Common lantana		
<a href="#"><i>Lantana montevidensis</i></a>	Creeping lantana		
<i>Leonotis nepetifolia</i>	Lion's tail		
<a href="#"><i>Mimosa pigra</i>*</a>	Mimosa*	Inside B zone	WMP
<i>Mimosa pudica</i>	Common sensitive plant		
<a href="#"><i>Parkinsonia aculeata</i></a>	Parkinsonia		
<i>Pistia stratiotes</i>	Water lettuce		
<a href="#"><i>Ricinus communis</i></a>	Castor oil plant		
<a href="#"><i>Salvinia molesta</i></a>	Salvinia		
<i>Schinus terebinthifolius</i> *	Brazilian pepper*	South of 18° S	
<a href="#"><i>Senna alata</i></a>	Candle bush		
<i>Senna obtusifolia</i>	Sicklepod		
<i>Senna occidentalis</i>	Coffee senna		
<i>Sida acuta</i>	Spinyhead sida		
<i>Sida cordifolia</i>	Flannel weed		
<i>Sida rhombifolia</i>	Paddy's lucerne		
<i>Stachytarpheta</i> spp.	Snake weeds		
<a href="#"><i>Tamarix aphylla</i></a>	Athel pine	Inside B zone	
<a href="#"><i>Themeda quadrivalvis</i></a>	Grader grass		WMP
<i>Tribulus cistoides</i>	Caltrop		
<i>Tribulus terrestris</i>	Caltrop		
<a href="#"><i>Xanthium strumarium</i></a>	Noogoora burr		
Syn. <i>Xanthium occidentale</i>			
<i>Xanthium spinosum</i>	Bathurst burr		

## Declared Weeds in the Northern Territory

### **Class C only** (all Class A and Class B weeds are also considered to be Class C weeds.)

Area to which declaration applies is all of the Northern Territory. Exceptions and clarifications to the species covered by the declaration are indicated by footnotes.)

Botanical name	Common name	Code
<i>Acroptilon repens</i>	Creeping knapweed	
<i>Ageratina riparia</i>	Mistflower	
<i>Amaranthus dubius</i>	Chinese spinach	
<i>Ambrosia artemisiifolia</i>	Annual ragweed	
<i>Ambrosia psilostachya</i>	Perennial ragweed	
<i>Anredera cordifolia</i>	Madeira vine	
<i>Asparagus asparagoides</i>	Bridal creeper	
<i>Asparagus scandens</i>	Asparagus fern	
<i>Asparagus declinatus</i>	Bridal veil	
<i>Asparagus aethiopicus</i>	Ground asparagus	
<i>Asparagus africanus</i>	Climbing asparagus	
<i>Asparagus plumosus</i>	Climbing asparagus Fern	
Syn. <i>Asparagus setaceus</i>		
<i>Austroeupatorium inulaefolium</i>	Austroeupatorium	
<i>Baccharis halimifolia</i>	Groundsel bush	
<i>Boerhavia erecta</i>	Erect spiderling	
<i>Brachiaria paspaloides</i>	Common signal grass	
<a href="#"><u>Chromolaena odorata</u></a>	Siam weed	Alert
<i>Clidemia hirta</i>	Koster's curse	
<i>Coix aquatica</i>	Job's tears	
<i>Croton hirtus</i>	Hairy croton	
<i>Cytisus scoparius</i>	Scotch broom	
<a href="#"><u>Datura spp.</u></a>	Thornapples	
<i>Digitaria fuscescens</i>	Common crabgrass	
<i>Digitaria insularis</i>	Sourgrass	
<i>Diodia sarmentosa</i>	Tropical buttonweed	
<i>Echinochloa glabrescens</i>	Barnyard grass	
<i>Echinochloa stagnina</i>	Burgu millet	
<i>Egeria densa</i>	Dense waterweed	
<i>Elodea canadensis</i>	Canadian pondweed	
<i>Equisetum spp.</i> <sup>2</sup>	Horsetails <sup>2</sup>	
<i>Eriocaulon truncatum</i>	Short pipewort	
<i>Eriocereus martinii</i>	Harrisia cactus	
<i>Eriochloa polystachya</i>	Carib grass	
<i>Fimbristylis umbellaris</i>	Globular fimbristylis	
<i>Genista linifolia</i>	Flax-leaved broom	
<i>Genista monspessulana</i>	Montpellier broom	
<i>Hybanthus attenuatus</i>	Western greenviolet	
<i>Hyptis brevipes</i>	Lesser roundweed	
<i>Ischaemum timorense</i>	Centipede grass	

List continued on next page

## Declared Weeds in the Northern Territory

## Class C (continued)

Botanical name	Common name
<i>Kochia scoparia</i> <sup>3</sup> Syn. <i>Bassia scoparia</i> <sup>3</sup>	Burning bush <sup>3</sup>
<i>Lagarosiphon major</i>	Lagarosiphon
<i>Leptochloa chinensis</i>	Red sprangletop, feathergrass
<i>Leptochloa panicea</i>	Sprangletop
<a href="#">Limnobiium laevigatum</a>	Amazon frogbit
<a href="#">Limnocharis flava</a>	Yellow burrhead, yellow sawah lettuce
<i>Miconia</i> spp.	Velvet tree
<i>Mikania cordata</i>	Heartleaf hempvine
<i>Mikania micrantha</i>	Mikania, mile-a-minute
<i>Mimosa invisa</i>	Giant sensitive plant
<i>Myriophyllum spicatum</i>	Eurasian watermilfoil
<i>Orobancha</i> spp. <sup>4</sup>	Broomrapes <sup>4</sup>
<i>Paederia foetida</i>	Lesser Malayan stinkwort
<i>Piper aduncum</i>	Spiked pepper
<i>Rhodomyrtus tomentosa</i>	Downy rose myrtle
<i>Rotala indica</i>	Indian toothcup
<i>Sacciolepis interrupta</i>	Cupscale grass
<i>Salvinia cucullata</i>	Salvinia
<i>Salvinia natans</i>	Salvinia
<i>Schoenoplectus juncooides</i>	Rock bulrush
<i>Scirpus maritimus</i> Syn. <i>Bolboschoenus maritimus</i>	Sea clubrush
<i>Senecio madagascariensis</i>	Fireweed
<i>Solanum elaeagnifolium</i>	Silver leaf nightshade
<i>Sorghum halepense</i>	Johnson grass
<i>Spermacoce mauritiana</i> Syn. <i>Spermacoce exilis</i>	Pacific false buttonweed
<i>Striga</i> spp. <sup>5</sup>	Witchweeds <sup>5</sup>
<i>Trapa</i> spp.	Floating water chestnuts
<i>Xanthium</i> spp.	Burrs

\* This species varies in declaration status in different parts of the Territory. For more information click on the species name above, or go to [www.nt.gov.au/weeds](http://www.nt.gov.au/weeds)

<sup>1</sup> Except *S. babylonica* (weeping willow), *S. X calodendron* (pussy willow) & *S. X reichardtiji* (sterile pussy willow).

<sup>2</sup> All including *E. ramosissimum*.

<sup>3</sup> All subspp. except subsp. *trichophylla*.

<sup>4</sup> All except *O. minor* and *O. cernua* var. *australiana*.

<sup>5</sup> All non-indigenous, including *S. angustifolia* and *S. asiatica*.

WMP = Weed management plan in force for this species under Section 10 of the [Weeds Management Act 2001](#).

Alert = Alert weeds are species that are present (or believed to be present), targeted for eradication in the Northern Territory and continue to present a major threat. For more information go to [www.nt.gov.au/weeds](http://www.nt.gov.au/weeds)



