NSW National Parks and Wildlife Service

Weed management strategy

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Acknowledgement of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the Traditional Custodians of the lands where we work and live.

We pay our respects to Elders past, present and emerging.

This resource may contain images or names of deceased persons in photographs or historical content.

Artist and designer Nikita Ridgeway from Aboriginal design agency – Boss Lady Creative Designs, created the People and Community symbol.

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Executive summary

Weeds are among the greatest threats to Australia's biodiversity. In NSW, over 80% of threatened plants listed under the *Biodiversity Conservation Act 2016* are threatened by weeds (NSW BioNet Threatened Species Profile Dataset 2024; Coutts-Smith and Downey 2006).

The NSW National Parks and Wildlife Service (NPWS) is responsible for managing weeds in national parks, safeguarding assets such as native plant and animal populations, threatened species and ecological communities, and cultural and natural heritage, and maintaining biosecurity obligations. NPWS uses integrated, best-practice management to reduce weed threats and impacts. Results are maximised through a strategic risk-based approach that reduces the impacts of existing weeds while preventing future impacts from new and emerging high-risk weeds, with an emphasis on conserving national park values and fulfilling biosecurity obligations.

This weed management strategy ('the strategy', summarised under 'Strategy summary') provides the framework for weed management, detailing long-term objectives and actions designed to maintain conservation and biosecurity goals. It outlines basic activities, such as monitoring, adaptive management and research, that support effective weed control. The Strategy covers a 10-year period and is reviewed as required. It is aligned with NPWS legislative responsibilities and other NSW Government strategies, such as the *NSW Invasive Species Plan 2023–2028* and regional strategic weed management plans.

The strategy is supported by implementation plans, standard operating procedures, protocols, governance frameworks, evaluation plans and other resources. A weed control plan sets out weed control programs to achieve priorities such as those in the NPWS Threatened Species Framework. Weed control programs are dynamic and reviewed annually or earlier if required. The control plan is used to guide the allocation of resources during operational and budget planning.

NPWS maintains monitoring and data management tools to support weed management, demonstrate biodiversity outcomes and adaptively manage control programs. Weed monitoring protocols enable standardised monitoring and data collection and analysis, which inform decision-making and facilitate adaptive management. Innovative best practice management tools and weed research are delivered through partnerships to enhance NPWS weed management impact and effectiveness.

Implementation of the strategic management approaches and actions outlined in this strategy will allow NPWS to fulfil its biosecurity obligations and control weeds to protect the natural and cultural heritage of NSW national parks.

Strategy summary

Vision: NSW national parks and their values are protected from the impacts of weeds

Outcome: Park values are conserved, and the impacts of weeds are minimised through strategic weed management

Objectives and actions of the weed management strategy

Objectives	1. Deliver threatened species, biodiversity and biosecurity priorities	2. Maximise benefits to biodiversity, natural and cultural heritage, and the community	3. Demonstrate weed control outcomes and improve programs	4. Improve weed management impact and effectiveness	5. Enhance knowledge, skills, resources and partnerships
Actions	Implement strategic weed management 1.1 Develop and maintain a weed control plan that identifies and prioritises NPWS weed control programs to: • deliver NPWS statutory obligations • achieve objectives in NSW Government biodiversity and biosecurity plans and strategies, including the NPWS Threatened Species Framework 1.2 Implement prioritised weed control programs	Prioritise weed management effort using best practice 2.1 Assess weed risk to determine appropriate management objectives and control actions 2.2 Provide tools to ensure effective, efficient and targeted weed control 2.3 Implement risk-based prioritisation of NPWS weed management activities 2.4 Maintain and improve knowledge of weed ecology, biology and impacts to biodiversity	Monitor, evaluate, report and adapt programs 3.1 Apply NPWS weed monitoring protocols to facilitate outcome-based weed monitoring and reporting 3.2 Increase quality and comprehensiveness of data to effectively demonstrate NPWS weed management effort and impact 3.3 Improve tools and build capabilities to facilitate standardised weed data management 3.4 Maintain integrated data systems and reporting frameworks for weeds	Support research and innovation and to apply new technology and tools 4.1 Facilitate research and innovation to improve best-practice weed control, surveillance, mapping and monitoring 4.2 Develop and apply post-disturbance weed decision-support tools 4.3 Integrate weed risk mitigation into NPWS fire and other land management activities 4.4 Apply innovation and research outcomes to NPWS weed management programs	Coordinate knowledge sharing, communication and collaboration 5.1 Build knowledge and capability for best-practice weed management 5.2 Participate in knowledge sharing across government, industry and community 5.3 Develop and maintain partnerships to leverage outcomes 5.4 Participate in strategic cross-tenure programs 5.5 Collaborate with government, industry and community partners to achieve shared biosecurity and biodiversity outcomes

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Glossary

Term	Definition
Asset-led program asset protection	A management program dedicated to the control of weeds designed to protect a biological (living), natural, cultural or infrastructure asset.
Containment program	A weed-led program designed to restrict a target weed to a specified containment area and to prevent its spread outside of this area.
Eradication program	A program designed to remove a target weed completely from a specified area, such that no plants, seeds or other reproductive materials remain.
Management objective	The overarching objective of a program that drives all management activities. Management objectives for weed control programs can be defined as either weed-led (see Prevention, Eradication, and Containment) or asset-led (see Asset protection).
Weed prevention program	A program designed to prevent the establishment of high-risk weeds in a specified area, particularly weeds known to be present nearby. Management typically involves pre-emptive surveillance around high-risk areas, shifting to eradication if an incursion is found.
Program	An invasive species control program is a structured set of activities unified by a single management objective (i.e. prevention eradication, containment, or asset protection), a target invasive species, a geographic area to which the objective applies (spatial extent), and measurable aims that allow for monitoring, resource allocation and prioritisation.
Pest and Weed Information System	The Pest and Weed Information System (PWIS) is NPWS's platform for capturing, storing and reporting on effort, costs and outputs from the organisation's investment in weed and feral animal management programs. Its functions comprise data acquisition, administration and expenditure, and a geodatabase holding extensive spatial datasets related to the planning and implementation of programs.
Weed	Weeds are introduced plants that have formed naturalised populations outside of their native range and may compete with native flora, harbour pests and disease, or otherwise harm the environment, agriculture or human activities.
Weed control plan	A weed control plan directs how weeds must be managed to achieve the objectives of this weed management strategy. For a control plan, each NPWS operational branch maintains a table of weed control programs categorised by prioritisation criteria (see Appendix 1).
Weed-led program	A program in which the objective is driven solely by a weed threat, with a focus on managing the weed. Contrast this with an asset-led program, with a focus on protecting an asset.

NPWS takes a strategic, risk-based approach

National Parks and Wildlife Service (NPWS) follows a strategic approach that prevents the spread, and minimises the impacts, of new and emerging weeds while reducing the impacts of existing weeds. This allows NPWS to protect national park values and fulfill its biosecurity obligations. This strategy provides the framework to achieve best-practice weed control and outlines long-term objectives and actions that will achieve conservation and biosecurity objectives.

The strategy is supported by implementation plans, standard operating procedures, protocols and other resources (Figure 1). The prioritisation framework detailed in this strategy delivers a weed control plan that guides the allocation of resources in operational and budget planning. A weed control plan sets out weed control programs to achieve priorities such as those in the NPWS Threatened Species Framework. Weed control programs are dynamic and reviewed annually or earlier if required. The control plan is used to guide the allocation of resources during operational and budget planning.

The strategy guides the planning, prioritisation and monitoring of weed control programs (Figure 1). Monitoring and data management frameworks and tools support outcome-driven weed management and allow NPWS to demonstrate control achievements and adaptively manage programs. Weed monitoring protocols enable standardised data collection and analysis to evaluate progress and inform decision-making.

Prioritising and implementing weed control

Assessing risk and legislative responsibilities

Weed control is prioritised in stage 1 of a 3-stage risk-based approach to weed management (Figure 2). Weed risk and legislative responsibilities are first assessed to determine action and inform the development of weed management programs. Programs are then developed to focus on either limiting the spread of the weed (weed-led) or reducing weed impacts on assets (asset-led). When weed control is implemented, weed treatment data are collected, analysed and evaluated to enable reporting and continuous improvement.

Weed risk assessments allow the identification of effective and feasible management objectives for each weed and guide the allocation of effort to where benefits will be greatest. Weed risk is determined by the weed's invasiveness, impacts and potential distribution. The cost of control, level of persistence and current distribution (area occupied by the weed) determine control feasibility. As per the NSW Weed Risk Management System (Johnson 2009), weed risk and management feasibility scores are combined in a matrix to determine management objectives for prevention, eradication, containment or asset-based protection programs (Figure 3).

NPWS manages weeds to fulfill its legislative obligations, primarily those under the *National Parks and Wildlife Act 1974*, *Biodiversity Conservation Act 2016* and *Biosecurity Act 2015*. Objectives in NSW Government biodiversity and biosecurity strategies and plans underpin weed control priorities on NPWS lands. Examples include the *NSW Invasive Species Plan 2023–2028*, regional strategic weed management plans, and the NPWS Zero Extinctions Threatened Species Framework.

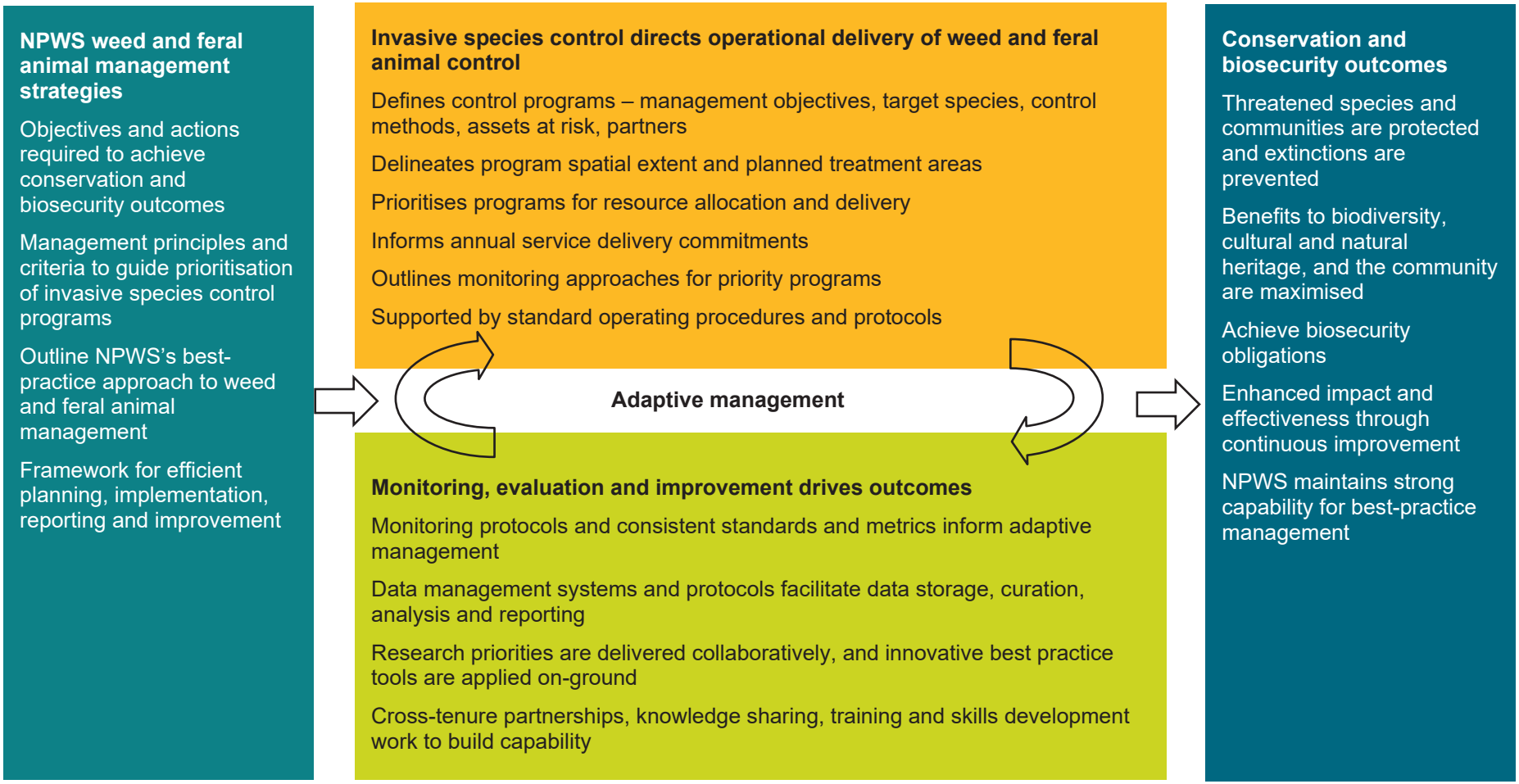


Figure 1 NPWS invasive species management strategies guide operational delivery to achieve outcomes

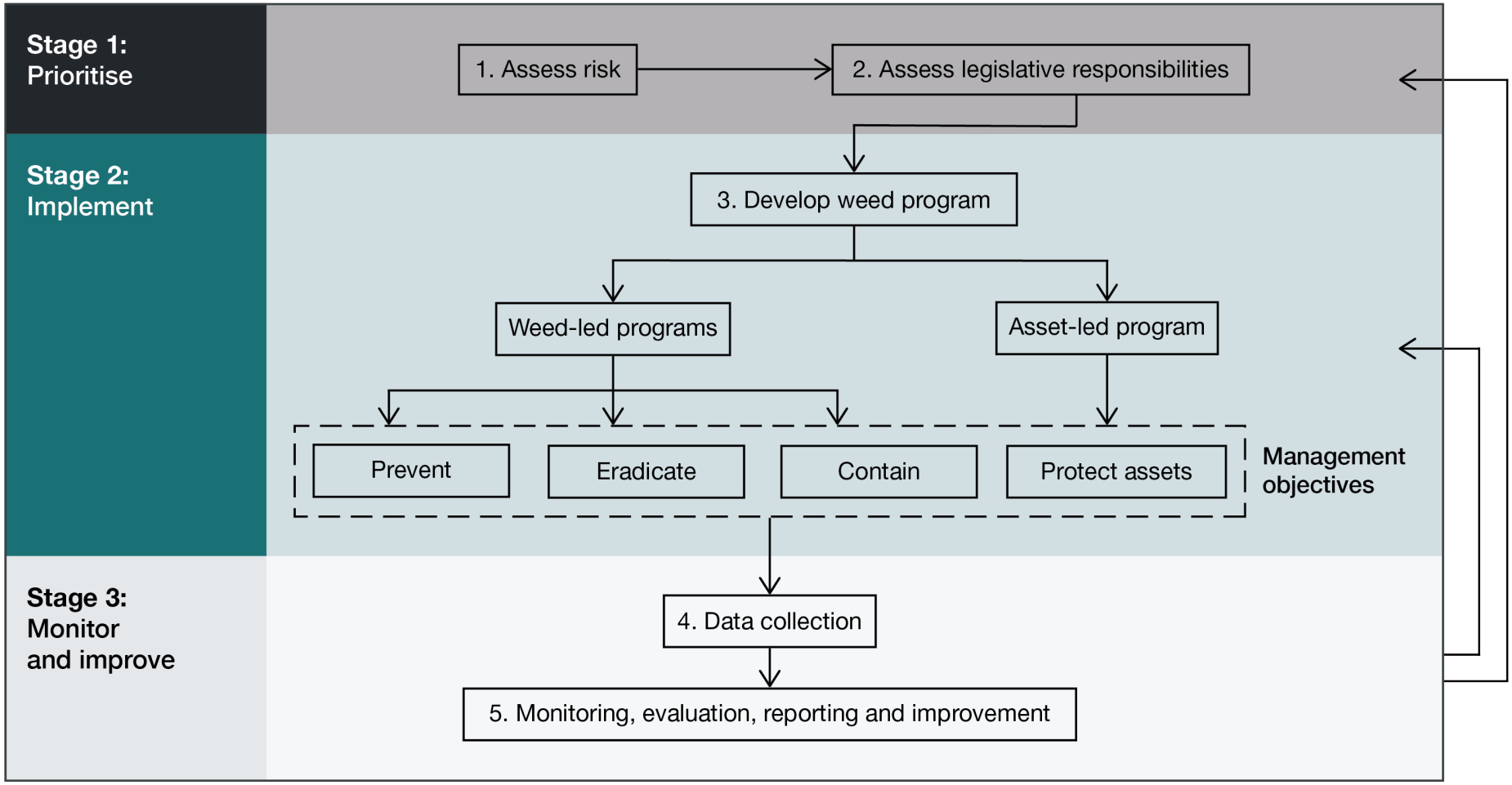
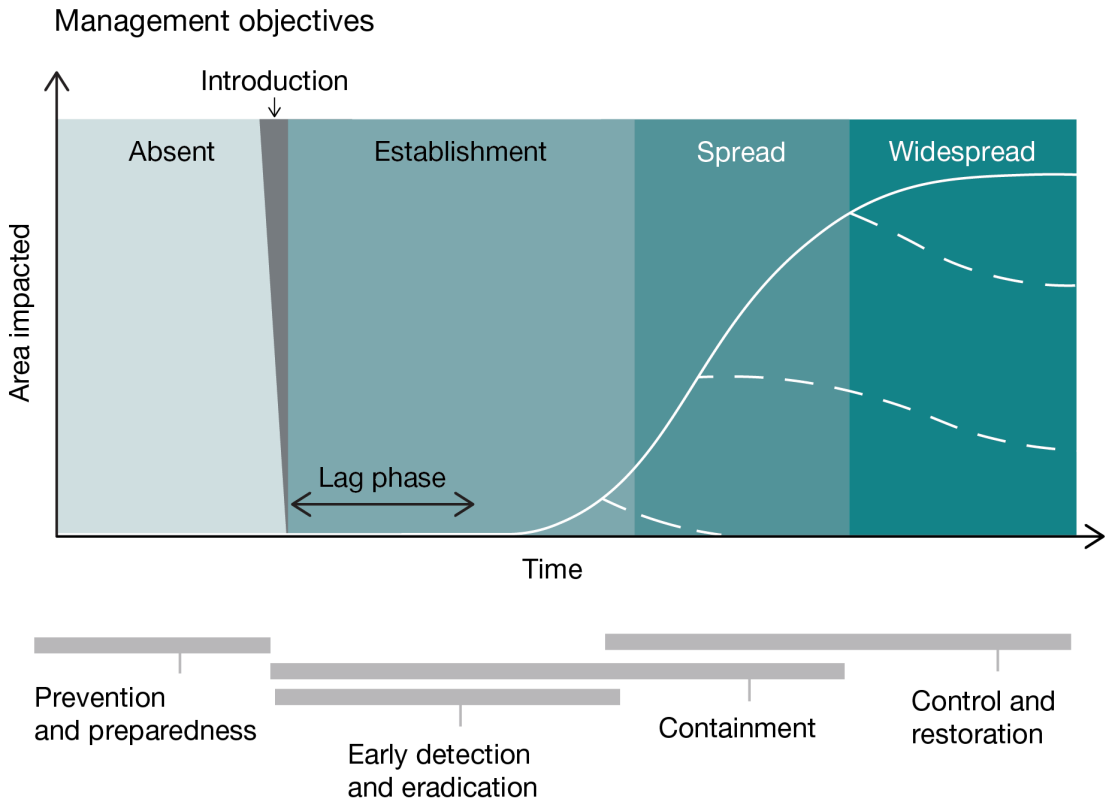
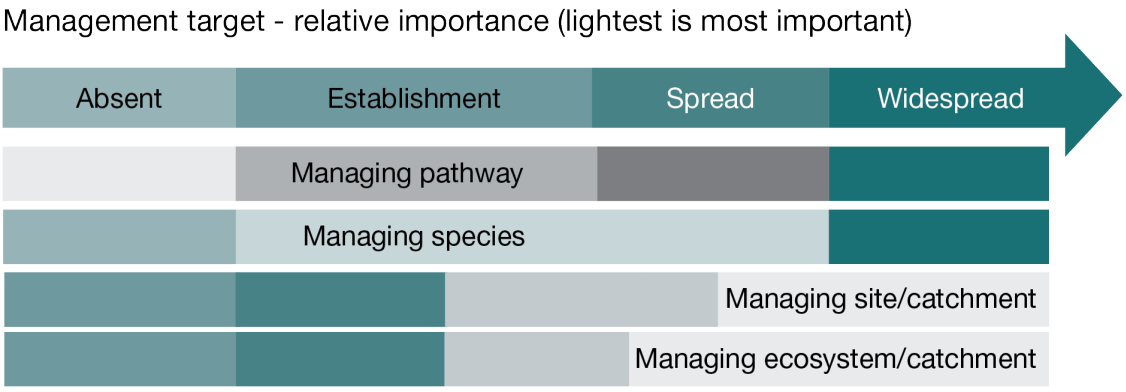


Figure 2 NPWS strategic approach to weed management





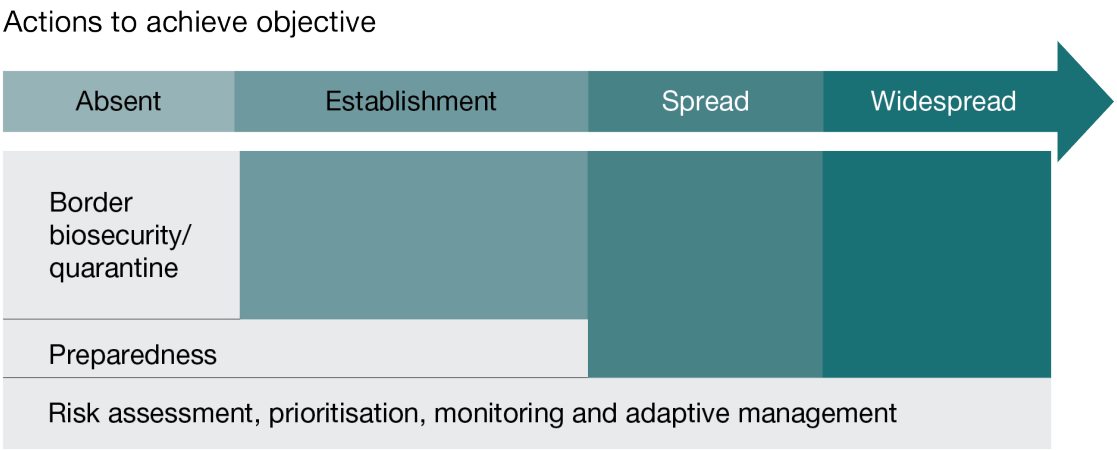


Figure 3 Generalised invasion curve

The curve shows efforts appropriate to invasion stage, projected spread without management (solid line) and expected changes in the trajectory of the curve with appropriate management actions (dashed line). Source: based on IPBES (2023)

Weed-led versus asset-led approaches

Weed-led programs, for prevention, eradication or containment, focus only on the weed and are generally attempted if a weed is at the early stage of invasion. They are appropriate for prevention activities or to address small incursions of high-risk weeds where a rapid response is required to prevent spread and establishment.

Many weeds are widely established in New South Wales, and elimination or control over large areas, such as in core infestations, is not reasonably practicable. Widespread weeds are prioritised for control where they compromise national park values or assets, including threatened species and biodiversity. NPWS programs for widespread weeds are asset-led and target one or more weeds in a defined geographic area to protect assets. This approach is also referred to as 'site-led', as the control activities are focused on a specific site or surrounding area.

Prioritisation framework

NPWS weed control programs are prioritised by the stage of weed invasion (Figure 3) and the driver or cause. The prioritisation framework (Appendix 1) guides the development of the weed control plan. Table 1 identifies categories and their objectives to prioritise weed-led or asset-led programs. NPWS controls weeds for many purposes, so the prioritisation approach identifies the key driver and purpose of programs to ensure that the objective is clear and achievable and progress can be evaluated.

Table 1 Categories and objectives to prioritise NPWS weed control programs*

Category	Category objective
Critical – Threatened Species Conservation	Weed control to protect threatened entities listed under the *Biodiversity Conservation Act 2016* and delivered through actions outlined in the NPWS Threatened Species Framework
Critical – Prevention, Eradication or Containment	Weed control to prevent, eradicate or contain weeds (at state or regional scales) to deliver biosecurity priorities under NSW Government legislation, policies or plans
Critical – Economic, Health or Disease	Weed control to prevent or reduce impacts on economic enterprises or human health or to fulfil commitments under carbon agreements, or as part of a declared emergency response
Critical – Major Disturbance	Weed control to abate an increased risk or to capitalise on improved management opportunities after a major disturbance
High – Heritage and Wilderness	Weed control to reduce impacts on Aboriginal cultural values, significant state, national or international historic heritage values, or national or international natural values, including declared wilderness
High – Threatened Species Conservation	Weed control to protect threatened species, populations or communities, additional to actions under the NPWS Threatened Species Framework
High – Isolated Infestations	Weed control to remove an isolated infestation of a high-risk weed that may be widely distributed in other parts of the region, but has high potential for significant future impacts on park values
Medium – Recreation Aesthetic	Weed control to manage impacts on recreational or aesthetic values
Medium – Biodiversity Conservation	Weed control to reduce impacts on biodiversity values, or to address Key Threatening Processes as listed in the *Biodiversity Conservation Act 2016*
Medium – Stakeholder Priorities	Weed control to reduce impacts on NPWS values identified as a stakeholder priority
Low – Localised Priorities	Control of weeds that have low or highly localised impacts

*See Appendix 1 for NPWS weed control prioritisation framework, including criteria for assigning program categories.

Weed control plan guides operational delivery

NPWS weed control programs are collated in a weed control plan, which supports objectives by identifying and prioritising weed control programs across NPWS lands. Guided by this strategy, the weed control plan prioritises actions to:

- meet NPWS conservation and biosecurity obligations
- deliver priority weed control to safeguard high-risk assets
- align weed control with NPWS conservation and threatened species programs
- prevent the spread and reduce the impacts of new and emerging weeds
- monitor high-priority programs to improve effectiveness
- incorporate innovative monitoring tools and control methods.

Programs are prioritised through the framework in Appendix 1 by assessing each program against categorisation criteria. Robust prioritisation allows a focus on weed control programs that achieve critical priorities, and guides NPWS effort to ensure that legislative and departmental obligations and objectives be delivered. Priority programs are considered for resourcing through annual service delivery planning.

NPWS designs control programs with the aim of minimising the impacts of weeds on the natural environment (including threatened species and ecosystems), cultural and heritage assets, visitor safety and park neighbours. Individual programs are developed to achieve desired management objectives that address weed threats. Programs are adaptable and are updated as required through an annual review and evaluation process.

A control program consists of a structured set of activities unified by:

- a single management objective (prevention, eradication, containment or asset protection)
- a target weed species (and, for asset-led programs, the assets at risk)
- a geographic area to which the management objective applies (spatial extent)
- measurable aims that allow for monitoring, resource allocation and prioritisation.

NPWS participates in cooperative, strategic cross-tenure weed control programs when the asset or target weed threat crosses administrative or tenure boundaries. Coordination of effort with other land managers ensures the most effective programs to meet shared objectives.

Weed treatment and extent data associated with weed control programs are captured in the Pest and Weed Information System (PWIS). This centralised system facilitates the storage, curation, analysis and reporting of spatial datasets from a diverse range of invasive species control programs and activities.

Monitoring, evaluation and improvement drives outcomes

NPWS develops and maintains monitoring and data management frameworks and tools to support outcome-driven weed management and adaptively manage weed control programs. Weed monitoring protocols provide high-level, standardised methods to measure progress towards weed control objectives and to facilitate analysis and continuous improvement.

Evaluation of asset-led programs (e.g. weed programs to protect a threatened species) requires monitoring weed control efficacy, as well as the response of the asset to weed control. For asset-led programs, the *Monitoring Manual for Invasive and Native Flora* (Watson *et al.* 2021) provides detailed guidance for field monitoring and reporting to monitor

the response of invasive weeds, native plants and ecological communities to weed control efforts.

Weed treatment data stored in the PWIS and threat and asset monitoring data can be used to inform best-practice weed management by evaluating operational outputs against measurable outcomes. NPWS aims to continually improve the efficiency and efficacy of weed management through the integration of new tools, technology, applied research and collaborations that support staff in delivering on-ground control.

Research and innovation priorities are identified, and the resulting new tools are used to enhance efficiency and improve best-practice weed management techniques. NPWS maintains a dynamic catalogue of priority weed research and innovation needs to facilitate delivery of research through collaborative partnerships.

NPWS priority focus areas for weed research and innovation include:

- remote sensing to improve weed distribution and density mapping
- biological control of weeds
- hygiene protocols, including social research to understand application and uptake
- biology and ecology research to inform weed risk assessments
- distribution and habitat suitability modelling, including under future climate scenarios
- best-practice weed management tools
- understanding weed impacts on biodiversity
- seed dynamics
- post-restoration weed control.

Delivering the NPWS weed management strategy

This strategy (summarised under 'Summary strategy') presents long-term objectives and actions designed to achieve desired conservation and biosecurity outcomes. Tables 2 to 6 provide further information on National Parks and Wildlife Service (NPWS) actions to meet objectives.

Objective 1. Deliver threatened species, biodiversity and biosecurity priorities

Table 2 Actions to implement strategic weed management

Action	Description
1.1 Develop and maintain a weed control plan that identifies and prioritises NPWS weed control programs to: • deliver NPWS statutory obligations • achieve objectives in NSW Government biodiversity and biosecurity plans and strategies, including the NPWS Threatened Species Framework	Weed control programs are prioritised to deliver NPWS statutory obligations and NSW Government biodiversity and biosecurity strategies and plans, including the NPWS Threatened Species Framework and regional strategic weed management plans. The prioritisation framework ensures alignment with legislative, NPWS, local, regional and state priorities and the application of appropriate risk-based, outcome-driven management objectives. The NPWS Threatened Species Framework outlines a series of actions to meet its commitment of zero extinctions on NPWS lands. These include implementing Conservation Action Plans for Assets of Intergenerational Significance, publishing Ecological Health Performance Scorecards, and delivering Saving our Species actions. Some weeds are listed as KTPs under state or Commonwealth legislation owing to their impact on threatened species, populations and communities. Seven KTPs related to weeds are listed under the *Biodiversity Conservation Act 2016*, which includes the objective to 'minimise the impacts of key threatening processes on biodiversity and ecological integrity'. Weeds that are related to KTPs are prioritised in the weed control plan where they are impacting on priority assets.
1.2 Implement prioritised weed control programs	A weed control plan guides operational delivery of weed control programs on NPWS lands to enable consistent, targeted weed control. Annual operational delivery plans outline actions and resource allocation to deliver programs to fulfil annual delivery commitments.

KTP = key threatening process.

Objective 2. Maximise benefits to biodiversity, natural and cultural heritage, and the community

Table 3 Actions to prioritise weed management effort using best practice

Action	Description
2.1 Assess weed risk to determine appropriate management objectives and control actions	Risk assessments are used to develop and prioritise programs based on risks posed by the weed. Weed risk assessments support decisions in assigning management objectives for asset-led and weed-led programs (prevention, eradication or containment). Disturbance risk assessments are used to identify where weed risk or management feasibility has changed following major fire, flood or drought (refer to action 4.2). If relevant, revised post-disturbance risk assessment results can be used to assign a new management objective.
2.2 Provide tools to ensure effective, efficient and targeted weed control	NPWS develops and maintains policies and standard operating procedures to support safe, effective and compliant best-practice weed control, including the use of herbicides. Capability and capacity for using these tools is maintained through formal training and development activities and succession planning (refer to action 5.1).
2.3 Implement risk-based prioritisation of NPWS weed management activities	The NPWS weed control prioritisation framework (Appendix 1) guides implementation of weed control programs. These programs are informed by NPWS priorities and weed risk assessments (refer to action 2.1) and are implemented using integrated, best-practice weed control methods.
2.4 Maintain and improve knowledge of weed ecology, biology and impacts on biodiversity	NPWS maintains expertise and knowledge to identify and respond to new incursions of weeds on NPWS lands. NPWS gathers biological and ecological information to support weed risk assessments, identifies knowledge gaps to inform research priorities (refer to action 4.1) and maintains networks with the scientific community (refer to action 5.3).

Objective 3. Demonstrate weed control outcomes and improve programs

Table 4 Actions to monitor, evaluate, report, and adapt programs

Action	Description
3.1 Apply NPWS weed monitoring protocols to facilitate outcome-based weed monitoring and reporting	NPWS weed monitoring protocols guide the collection of data for weed control programs to facilitate meaningful outcome reporting, inform decision-making, and track progress towards objectives. Consistent metrics are used to measure efficacy and impact of weed control effort and allow outcome-based weed monitoring and reporting. Weed management, monitoring and reporting metrics include: • operational outputs, e.g. area controlled, area surveyed, effort and cost • monitoring outputs, e.g. number or density of weeds, area of weed absence • monitoring outcomes, e.g. weed area of occupancy (eradication programs); response of assets, such as a threatened species, to weed control. Weed monitoring data are shared across programs to support adaptive management. Weed control and monitoring data are integrated with threatened species and ecological health programs to improve understanding of how weed control can influence species trends and inform conservation priorities. Improved data access enables analysis of the relationships between species trends and weed populations at multiple scales.
3.2 Increase quality and comprehensiveness of data to effectively demonstrate NPWS weed management effort and impact	NPWS develops and maintains weed data management systems and standards, including data collection standards, to ensure consistent approaches and build organisational capability to effectively collect, analyse, present and share weed data and inform adaptive management. Weed control actions and effort are recorded in the PWIS for compliance, management and reporting purposes. Analyses of weed management data are presented to key stakeholders to inform decision making.
3.3 Improve tools and build capabilities to facilitate standardised weed data management	NPWS aims to provide staff with robust and effective data collection tools that streamline data collection; are easy to use; facilitate monitoring of weed control and program efficacy; integrate with data storage, processing and reporting systems; and allow management of weed data consistent with NSW Government data management policies and procedures. Consistent standards and improved tools build capability across NPWS to manage weeds effectively. Staff are provided opportunities to develop skills and competencies in new technologies which improves ability for safe, effective and compliant weed control.
3.4 Maintain integrated data systems and reporting frameworks for weeds	Weed control and monitoring data are shared and integrated across NPWS, DCCEEW and other relevant NSW Government programs and systems to inform decision-making. NPWS aims to continually improve data management processes and systems, including through: • standardised data collection, processing, analysis and presentation • effective data governance • robust data storage and processing systems that allow for integration of new and developing technologies, such as species recognition software.

PWIS = Pest and Weed Information System.
DCCEEW = Department of Climate Change, Energy, the Environment and Water.

Objective 4. Improve weed management impact and effectiveness

Table 5 Actions to support research and innovation and to apply new technology and tools

Action	Description
4.1 Facilitate research and innovation to improve best-practice weed control, surveillance, mapping and monitoring	NPWS identifies and facilitates priority research and innovation to support best-practice weed management informed by the latest information and technology. NPWS aims to: • create and maintain a publicly accessible database of current research needs and priorities • work with partners to facilitate and support research on priority NPWS weed management issues • promote collaborative research on national park lands.
4.2 Develop and apply post-disturbance decision-support tools	Disturbance, such as bushfire, flood and drought, can present risks and opportunities in weed management. NPWS aims to work with other land managers to develop and use post-disturbance decision-support tools to mitigate risks and maximise opportunities for effective weed management following major disturbances (e.g. controlling spread of priority weeds following floods). Also see Action 2.1.
4.3 Integrate weed risk mitigation into NPWS fire and other land management activities	To enable holistic management, NPWS aims to share knowledge of weed risk and weed management priorities with fire managers to influence hazard reduction planning to mitigate weed spread and impacts. This includes working with stakeholders involved in fire, threatened species and other management programs to integrate weed management planning and better protect high-value assets.
4.4 Apply innovation and research outcomes to NPWS weed management programs	NPWS integrates new tools, technologies and approaches into weed control programs to improve effectiveness and efficiency. Weed research outcomes and innovations are used in NPWS weed management planning and control programs to improve management.

Objective 5. Enhance knowledge, skills, resources and partnerships

Table 6 Actions to coordinate knowledge sharing, communication and collaboration

Action	Description
5.1 Build knowledge and capability for best-practice weed management	NPWS aims to continually improve knowledge and capabilities for best-practice weed management through: • development of standard operating procedures and guidance • publishing and using tools and knowledge to support best-practice weed management • provision of training, accreditation and work experience opportunities for staff.
5.2 Participate in knowledge sharing across government, industry and community	Knowledge sharing within NPWS and with neighbours and other stakeholders improves capability for early detection and rapid response to new weed incursions and improves best-practice management. NPWS shares information on its weed management priorities and actions with government, industry and community groups. This includes local engagement with park visitors via media tools and events, and with local government weed managers through regional weed committees, further strengthening collective weed management capabilities.
5.3 Develop and maintain partnerships to leverage outcomes	NPWS can better achieve its vision of protecting NSW national parks by working with partners to benefit from outcomes. Partnerships are built on shared goals and complementary skillsets. Examples include: • partnerships with research institutions to deliver priority research to develop weed management tools or address weed management challenges • partnerships with local government and park neighbours to increase capability for weed management to enable biodiversity protection • partnerships with other government agencies, industry and the community, including volunteers, to deliver shared weed management outcomes.
5.4 Participate in strategic cross-tenure programs	Cross-tenure programs and collaborations allow landscape-scale management and joint delivery of shared objectives, such as maintaining state and regional weed containment zones. NPWS maintains cross-tenure partnerships through local, regional, state and national governance bodies and participates in priority cross-tenure weed management programs at local, regional and state levels.
5.5 Collaborate with government, industry and community partners to achieve shared biosecurity and biodiversity outcomes	NPWS weed management aims to achieve biosecurity and biodiversity outcomes in partnership with government, industry and community. NPWS is an active participant in weed management governance locally, regionally and statewide, participating in planning, cross-tenure weed management and capability-building activities.

References

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More information

Zero extinctions – threatened species framework, Environment and Heritage website.

Appendices

Appendix 1 NPWS weed control prioritisation framework

Weed control programs are designed to achieve desired management objectives (prevention, eradication, containment or asset-led protection) based on the distribution and level of risk posed by the weed. Each program is categorised against criteria (Table 7) that allows prioritisation and allocation of resources. The National Parks and Wildlife Service (NPWS) weed control plan comprises a table of all weed programs across NPWS lands. Priority programs are considered for resourcing through annual service delivery planning.

Table 7 Framework to prioritise weed control programs, including priority category, objective and criteria for assigning categories

Priority category	Objective	Criteria
Critical – Threatened Species Conservation	Weed control to protect threatened entities listed under the *Biodiversity Conservation Act 2016* and delivered through actions outlined in the NPWS Threatened Species Framework	Both of the following: • Weeds identified in a NSW Government-endorsed prioritisation process as a threat to the threatened entity. • NPWS has an agency-level commitment under an existing strategy or is legislatively responsible for managing the threats, including the weed, to protect the threatened entity (e.g. prevent extinctions; stabilise or improve the trajectory of threatened species). This includes: 1. legislative responsibilities to control weeds as part of a Conservation Action Plan for an Asset of Intergenerational Significance 2. implementing strategic weed control programs to deliver the NPWS Threatened Species Framework 3. implementing strategic weed control programs to deliver priority Saving our Species programs on NPWS lands 4. implementing strategic weed control programs to minimise weed impacts on Areas of Outstanding Biodiversity Value.

Priority category	Objective	Criteria
Critical – Prevention, Eradication or Containment (C-PEC)	Weed control to prevent, eradicate or contain weeds at the state or regional scale	One or more of the following: • Weed control to deliver management priorities under NSW Government legislation, including weeds listed as Prohibited Matter, Control Orders or Biosecurity Zones under the *Biosecurity Act 2015.* • Weed control to deliver 'Prevention, Eradication or Containment' (i.e. Exclusion Zone) priorities in Local Land Services' Regional Strategic Weed Management Plans. • Weed control to deliver 'Prevention, Eradication, Destroy Infestations or Contain Spread' priorities, as determined by a NSW Weed Risk Management assessment completed by NPWS.
Critical – Economic, Health or Disease (C-EHD)	Weed control to prevent or reduce impact on economic enterprises or human health, or as part of a declared emergency response	One or more of the following: • Weed control where there is evidence that the weed is severely reducing the productivity of neighbouring economic enterprises. • Control of weeds that are physically harmful or highly toxic to humans, wildlife or livestock and frequently cause death or severe illness or injury. • Control of weeds that are a vector for plant disease (e.g. as per direction from a plant health authority). • Weed control as part of declared state or national emergency response. • Control of weeds to contribute substantially to the NSW Government's priority carbon or nature-positive programs.
Critical – Major Disturbance (C-MD)	Weed control to abate an increased risk or to capitalise on improved management opportunity after a major disturbance (an extreme event that occurs on a landscape scale and is extraordinary for the area or region, i.e. is not a discrete, localised disaster, irrespective of severity)	One or more of the following: • Control of weeds identified as having increased invasiveness, impact or management feasibility shortly after a major disturbance event, as identified through risk assessment • NPWS can capitalise on a management opportunity after a major disturbance. The program will revert to its previous category or be re-categorised when: • the critical recovery period or identified opportunity has passed and one or more of the following: • risks have been mitigated during the critical recovery period. • three years of control has passed. • the asset status is self-sustainable or has recovered to its pre-disturbance level.

Priority category	Objective	Criteria
High – Heritage and Wilderness (H-HW)	Weed control to reduce impacts on Aboriginal cultural values, significant state, national or international historic heritage values, or national or international natural values	One or more of the following: • Control of weeds that are having unacceptable impacts on state values, cultural heritage, national natural heritage or world heritage. • Control of weeds that harm Ramsar, JAMBA, CAMBA or ROKAMBA sites. • Control of weeds that harm Wild Rivers or declared Wilderness Areas. • Control of weeds that impact on Assets of Outstanding Universal Value.
High – Threatened Species Conservation (H-TSC)	Weed control to protect threatened species, populations or communities	All of the following: • Weed control where NPWS does not have an agency-level commitment for weed management under an existing strategy to manage weeds to protect the threatened entity. • The threatened entity's presence at the site can be verified. • The weed will significantly harm the threatened entity if left unmanaged in the short term. • Other high-level threats are being actively managed (i.e. weeds are the primary threat, or multiple threats at the site are managed).
High – Isolated Infestations (H-II)	Weed control to remove isolated incursions of high-risk weeds that may be widely distributed in other parts of the region, and with high potential for future impacts on park values	• Weed control to eradicate or completely remove weed infestations, where these actions are recommended through a NSW Weed Risk Management System assessment completed by NPWS at the area or reserve scale.
Medium – Recreation Aesthetic (M-RA)	Weed control to manage impacts on recreational or aesthetic values	• Control of weeds that do not have a significant impact on biodiversity and are managed by NPWS around visitor infrastructure for recreational or aesthetic purposes.
Medium – Biodiversity Conservation (M-BC)	Weed control to reduce impact on biodiversity values, or to address KTPs.	• Control of weeds that impact or will impact harm identified threatened entities if left unmanaged in the long term (reduced urgency for immediate control) and one or more of the following: • Weed control has a lower likelihood of resulting in the recovery of the threatened entity, owing to the presence of other unmanaged threats, poor entity condition, or reduced feasibility of control. • Control of weeds identified as KTPs when the impacts of the weed may result in an entity becoming threatened. • Control of weeds that harm a threatened entity on a localised level, but the entity is otherwise widespread across its range.

Priority category	Objective	Criteria
Medium – Stakeholder Priorities (M-SP)	Weed control to reduce impacts on NPWS values that are identified as a stakeholder priority	One or more of the following: • Control of weeds that are harming values or assets important to stakeholders. • Control of weeds that are included in a priority stakeholder plan or program. • Control of weeds as part of volunteer or cultural awareness programs contributing to NPWS priorities and that promote skills, awareness and involvement with national parks.
Low – Localised Priorities (L-LP)	Control of weeds that have low or very localised impacts	One or more of the following: • Control of weeds to maintain local, long-term weed programs. • Control of weeds that have localised impacts and are not critical, high or medium priorities. • Control of weeds that have localised impacts on historic heritage of local value.

KTP = key threatening process.