Mamre Road Data Centre Campus (SSD-92743706)

Weed Eradication and Management Plan

Final Report

Prepared for Plan Project Management

14 November 2025

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- NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) for access to the BioNet Atlas of NSW Wildlife.
- NSW Department of Primary Industries Fisheries for access to the predicted distribution maps for threatened species and fish communities.

Biosis staff involved in this project were:

- Todd Horton (assistance in the field)
- Jenny Beckius (mapping)

Biosis acknowledges the Aboriginal and Torres Strait Islander peoples as Traditional Custodians of the land on which we live and work.

We pay our respects to the Traditional Custodians and Elders past and present and honour their connection to Country and ongoing contribution to society.

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Definitions

BC Act	*Biodiversity Conservation Act 2016*
Biosecurity Act	*Biosecurity Act 2015*
CEEC	Critically Endangered Ecological Community
Cth DCCEEW	Australian Commonwealth Department of Climate Change, Energy, the Environment and Water
DBH	Diameter at breast height
EEC	Endangered Ecological Community
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
GIS	Geographic Information System
LEP	Local Environmental Plan
LGA	Local Government Area
LLS	Local Land Services
NPW Act	*National Parks and Wildlife Act 1974*
NSW	New South Wales
NSW DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
PCT	Plant Community Type
study area	706–752 Mamre Road, Kemps Creek NSW
TEC	Threatened Ecological Community
VMP	Vegetation Management Plan
VRZ	Vegetated Riparian Zone
WoNS	Weeds of national significance

1 Introduction

1.1 Project background

Biosis Pty Ltd was commissioned by Plan Project Management to develop a Weed Eradication and Management Plan (WEMP) for the property at 706-752 Mamre Road in Kemps Creek, NSW (Lot 10 DP1280592) (the study area) (Figure 1) to support the development of a proposed data centre campus and associated infrastructure (the Project). The Project's development footprint will involve development site preparation works including the demolition of an existing structure, the infill of man-made dams, and removal of vegetation to allow for the Project's associated infrastructure.

The development footprint is largely contained within 706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592). The development site also includes areas across the shared boundaries to the east and south, utilised to facilitate roadworks and bulk earthworks. These areas include:

- Gibb Group site to the East known as 1-22 Bakers Lane, Kemps Creek (Lot 40 in DP 709347).
- GPT Group site to the South known as 754 Mamre Road, Kemps Creek (Lot 180 in DP 1290397).

Additionally, power supply lead-in from Sydney-West Substation is proposed as part of the development, which traverses through multiple landholdings.

The Project is being assessed as a State Significant Development (SSD) and will be assessed under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act), with the Minister for NSW Department of Planning, Housing and Industry (DPHI) as the approval authority. Preparation of the WEMP is a requirement of the *Mamre Road Precinct Development Control Plan 2021* (Penrith DCP 2021), under Clause 2.2.2, Control 4 and 2.2.3, Control 10 and 11 (see Section 2.1.3).

1.2 Location of the study area

This WEMP applies to the study area (Figure 1), which is defined Lot 10 DP1280592. The study area is approximately 52.9 hectares and is zoned as RU2 Rural Landscape and Infrastructure SP2 under the Penrith Local Environmental Plan 2010 (LEP). In addition, the study area occurs on land within the Cumberland Plain Conservation Plan (CPCP) area. Within the development site, certified 'Urban Capable Land' land and non-certified 'Excluded Land', occur as mapped under the CPCP.

The study area is bounded in the north by Bakers Lane, by Mamre Road to the west, and private property to the south and east. The development site is approximately 12.5 kilometres southwest of Blacktown central business district (CBD).

The study area is within the:

- Hawkesbury Catchment Management Area.
- Greater Sydney Local Land Services (LLS) region.
- Penrith City Council (Council) local government area (LGA).
- Mamre Road Precinct (Mamre Road) (Penrith DCP 2021).

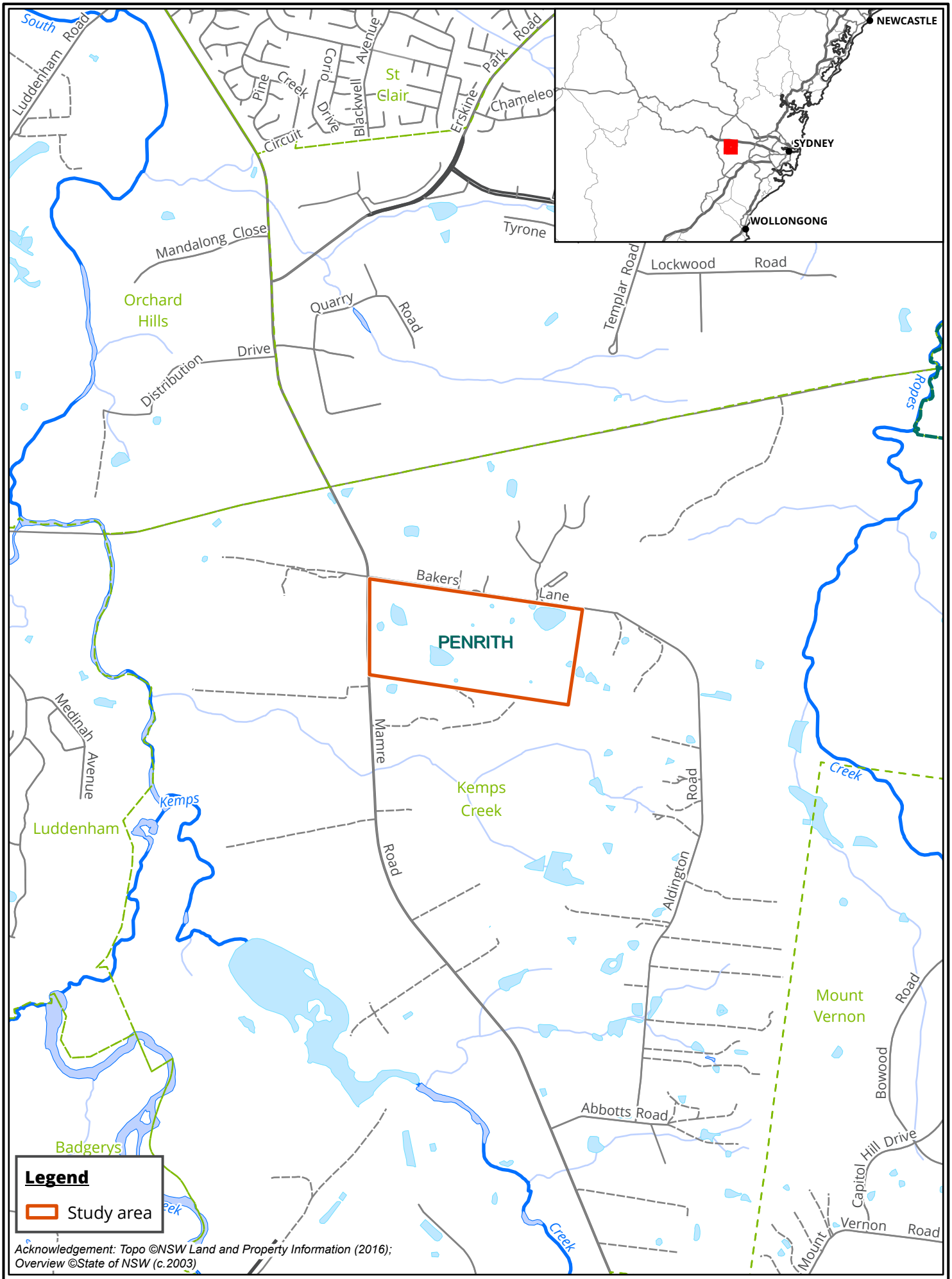
The study area currently consists of previously cleared lands with scattered representations of native vegetation with a residential dwelling and associated sheds and infrastructure. Nine dams were recorded

within the study area which were linked by a number of ephemeral drainage lines. The surrounding land use is similar with residential dwellings on rural lots allocated to small agricultural ventures. (Figure 1)

1.3 Scope

The score of this WEMP includes:

- Identification and mapping of weeds present within the study area.
- Details regarding the weed infestation levels within the study area.
- An outline of appropriate management methods and timelines for eradication and control of weeds on the site.
- Further management actions required for site hygiene to minimise the spread of weed material, including vehicle wash down protocols, monitoring and control procedures.



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APEM Group

Figure 1 Location of the study area

Matter: 43542, Date: 16 October 2025,
Prepared for: JN, Prepared by: JB, Last edited by: jbeckius
Location: P:\43500s\43542\Mapping\
43542_MamreRd_KempCrk_WeedMgmtPlan
Layout: 43542_F1_Locality

0 200 400 600 800 1,000
Metres
Scale 1:25,000@ A4, GDA2020 MGA Zone 56

N

2 Environmental requirements

2.1 Relevant legislation and guidelines

The following legislation and guidelines that have been used to assist in the formulation of this document:

- NSW *Biosecurity Act 2015.*
- *Penrith Local Environmental Plan 2010.*
- *State Environmental Planning Policy (Western Sydney Employment Area) 2009.*
- *Mamre Road Precinct Development Control Plan 2021* (Penrith DCP 2021).
- Business Activity Strategic Plan 2013-2023 (Hawkesbury River County Council 2013).

2.1.1 Biosecurity Act 2015

The Biosecurity Act outlines biosecurity risks and impacts, which in relation to the current assessment includes those risks and impacts associated with weeds. A biosecurity risk is defined as the risk of a biosecurity impact occurring, which for weeds includes the introduction, presence, spread or increase of a pest plant into or within the State or any part of the State. A pest plant is a nonnative species that has the potential to out-compete other organisms for resources, including food, water, nutrients, habitat and sunlight and/or harm or reduce biodiversity.

Under the Biosecurity Act a priority weed is any weed identified in a local strategic plan, for a region that includes that land or area, as a weed that is or should be prevented, managed, controlled or eradicated in the region. A local strategic plan here refers to a local strategic plan approved by the Minister under Division 2 of Part 4 of the *Local Land Services Act 2013*.

The Biosecurity Act introduces the concept of General Biosecurity Duty which, as detailed in Section 22 of the Act, which is defined as:

> *Any person who deals with biosecurity matter or a carrier and who knows, or ought reasonably to know, the biosecurity risk posed or likely to be posed by the biosecurity matter, carrier or dealing has a biosecurity duty to ensure that, the biosecurity risk is prevented, eliminated or minimised, so far as is reasonably practicable.*

Although the General Biosecurity Duty applies (DPI 2020) broadly, there are a number of elements that must be satisfied including:

> *Dealing with* – the general biosecurity duty only applies to a person who 'deals with' biosecurity matter or a carrier of biosecurity matter. 'Deal with' includes a wide range of activities, which are listed in Section 12 of the Act. Some examples of dealing with biosecurity matter are; to keep, possess, grow, breed, move, supply or manufacture biosecurity matter.
>
> *Knowledge* – a person must know, or ought reasonably to know, that there is or is likely to be a biosecurity risk arising from the biosecurity matter, carrier or 'dealing'. This will be a question of fact and will depend on the circumstances of each situation.

The Developer or its representatives, are to engage construction contractors for the project, henceforth referred to as the Contractor, who will be considered to have custody or control of NSW Priority weed species

and WoNS on the site, as they have the potential to move and dispose of these NSW Priority weed species and WoNS, and/or to cause this to occur. These are considered 'dealings' under the Act.

The Contractor has a duty of care to know that moving and/or disposing of NSW Priority weed species and WoNS would cause a biosecurity risk, and as such, the Contractor is considered a 'person who deals with' a known biosecurity matter, and to whom the general biosecurity duty applies. The Contractor must therefore ensure the biosecurity risk is prevented, eliminated or minimised, as far as is reasonably practicable with the proposed project.

Sections 7 and 8 below provide a framework for the Contractor to discharge their general biosecurity duty.

2.1.2 Penrith Local Environmental Plan 2010

Local Environmental Plans (LEPs) guide planning decisions for LGAs. They apply either to the whole or part of a LGA and make provision for the protection or utilisation of the environment through zoning of land and development controls. The *Penrith Local Environmental Plan 2010* (LEP) is not applicable to the land as the provisions of *State Environmental Planning Policy (Western Sydney Employment Area) 2009* (SEPP WSEA) apply.

2.1.3 Mamre Road Precinct Development Control Plan 2021

Development Control Plans (DCPs) provide detailed planning and design guidelines to support planning controls. DCPs identify additional development controls and standards for addressing development issues at a local level. Preparation of the WEMP is a requirement of the Mamre Road Precinct Development Control Plan 2021 (Penrith DCP 2021), under Clause 2.2.2, Control 4 and 2.2.3, Control 10 and 11.

Clause 2.2.2, Control 4 – *A Weed Eradication and Management Plan outlining weed control measures during and after construction is to be submitted with the development application.*

Clause 2.2.3, Control 10 - *WoNS (Weeds of National Significance) and weeds on the National Environmental Alert List under the National Weeds Strategy are to be managed and eradicated (refer to NSW Weed Wise for current weed identification and management approaches).*

Clause 2.2.3, Control 11– *All subdivision design and bulk earthworks are to consider the need to minimise weed dispersion and promote weed eradication. A Weed Eradication and Management Plan, outlining weed control measures during and after construction, is to be submitted with any subdivision development application.*

2.1.4 Business Activity Strategic Plan 2013-2023

Hawkesbury River County Council is a single purpose Council that administers the Biosecurity Act 2015 throughout the areas of Penrith City Council, as well as Blacktown Council, Hawkesbury Council, and the Hills Shire Council. Hawkesbury River County Council recognises four main objectives as part of their Business Activity Strategic Plan 2013-2023 (Hawkesbury River County Council 2013), which include:

- *Prevent the establishment of new weed species within our County – Exclude.*
- *Eliminate the spread of new and existing weed species within our County – Eradicate or Contain.*
- *Reduce the impact of widespread weeds on key assets – Effectively Manage.*
- *Ensure the community, industry and government stakeholders have the ability and long-term commitment to manage weeds – Build Capacity.*

In line with these objectives, Hawkesbury River County Council can carry out inspections of properties to 'monitor the effectiveness of each land manager's noxious plant' (priority weed) 'control program', as well as 'commence regulatory action under the *Noxious Weeds Act 1993*', 'where control programs are not put in place or are ineffective'. As such, it is in the interest of landholders and/or property managers to address priority weed issues on their property.

The Biosecurity Act came into effect in 2015 and repeals the *Noxious Weeds Act 1993* (NW Act). Exotic species formerly determined as noxious weeds under the NW Act are now referred to as NSW Priority weed species and WoNS if these species are now listed under the Biosecurity Act.

2.1.5 Other strategic environmental plans relevant to the project

Australian weeds strategy 2017 – 2027

The Australian weeds strategy (Invasive Plants and Animals Committee [Commonwealth of Australia 2017]) "*provides national guidance on best practice weed management. It aims to guide coordination of effort across all jurisdictions and affected stakeholders and to inform plans and actions by state and territory governments, local governments, regional natural resource management (NRM) agencies, as well as by industry, landholders and the wider community*"

As such, the strategy is guided by the seven principles of effective weed management being:

- Effective weed management is a responsibility shared between landholders, community, industry and government.
- Evidence-based decision-making should underpin the approach to weeds.
- Risk-based prevention and early intervention is generally the most cost-effective approach for managing weeds.
- Prioritisation of weed management must be informed by a risk-based approach, considering feasibility, likelihood of success and impact.
- Coordination amongst landholders, community, industry and government is necessary to manage weeds at a landscape scale.
- Coordination amongst landholders, community, industry and government is necessary to manage weeds at a landscape scale.
- Individuals, organisations and industry groups that create risks that may result in a weed entering, emerging, establishing or spreading in Australia have a role in minimising the impacts and contributing to the costs of management

Based upon these seven principals, a list of 32 Weeds of National Significance (WoNS) was developed based upon a recognition of the exotic flora species current and future potential threat to Australia's economy, its natural environment and/or social impacts.

3 Methodology

3.1 Desktop research

Biosis conducted a review of all available design plans and reports relating to the site and adjacent areas, as well as relevant legislation, recent vegetation mapping, and other documentation and legislation relevant to the current project, including:

- *Biosecurity Act 2015* for priority listed weeds for the Greater Sydney Local Land Services (LLS) area.
- Biodiversity Development Assessment Report for 706-752 Mamre Road, Kemps Creek, NSW, 2178. Report for Plan Project Management (Biosis 2025).
- Biodiversity Development Assessment Report for ISPT Summit at Kemps Creek. for ISPT Pty Ltd (Cumberland Ecology 2022).
- Weed Eradication and Management Plan – Summit at Kemps Creek. Report for ISPT Pty Ltd (Cumberland Ecology 2022).
- Greater Sydney Regional Strategic Weed Management Plan 2023 – 2027 (State of New South Wales through Local Land Services, 2022).
- Australian Weeds Strategy 2017 – 2027 - Invasive Plants and Animals Committee (Commonwealth of Australia 2017).
- Saving Our Species, Hygiene guidelines - Protocols to protect priority biodiversity areas in NSW from Phytophthora cinnamomi, myrtle rust, amphibian chytrid fungus and invasive plants (DPIE 2020).
- Noxious and Environmental Weed Control Handbook. A Guide to Weed Control in Non-crop, Aquatic and Bushland Situations, 5th Edition (DPI, 2016).

3.2 Site assessment

A general flora and fauna site survey of the study area was conducted on 17 September 2025 by Todd Horton (Botanist) and 7 October 2025 by Paul Price (Principal Botanist / Restoration Ecologist). The study area was surveyed using random meander methods. This involved the below activities:

- The identification of exotic plant species, according to *The Flora of NSW* (Harden 1992, Harden 1993, Harden 2000, Harden 2002) with reference to recent taxonomic changes.
- Documenting exotic flora populations and their extent within the study area.

3.3 Limitations

Ecological surveys provide a sampling of flora and fauna at a particular time and season. There are several reasons why not all species will be detected at a site during survey, such as species dormancy, seasonal conditions, the ephemeral status of waterbodies, and migration and breeding behaviours of some fauna. In many cases these factors do not present a significant limitation to assessing the overall ecological values of a site.

4 Results

4.1 Vegetation communities

The study area contains three Plant Community Types (PCTs) and areas of non-native vegetation, being:

- PCT 3320 Cumberland Shale Plains Woodland.
- PCT 3975 Southern Lower Floodplain Freshwater Wetland.
- PCT 4023 – Coastal Valleys Riparian Forest.
- Non-native vegetation. (Figure 2)

Cumberland Shale Plains Woodland

The Cumberland Shale Plains Woodland within the study area was found to be in moderate – regrowth, low and Derived Native Grassland (DNG) condition states. The latter two condition types were largely similar being separated primarily by the abundance of native ground storey species.

The community was characterised by a canopy dominated by Forest Red Gum *Eucalyptus tereticornis* and Grey Box *Eucalyptus moluccana*. The midstorey was devoid of native vegetation. Exotic species present included Sticky Nightshade *Solanum sisymbriifolium,* with scattered occurrences of African Olive *Olea europaea* var. *europaea,* African Boxthorn *Lycium ferocissimum* and Kei Apple *Dovyalis afra*.

The ground layer contained a mix of native and exotic grasses and forbs. Where present, native species included Kangaroo Grass *Themeda triandra*, Purple Wiregrass *Aristida ramosa*, Tall Chloris *Chloris ventricosa,* Weeping Grass *Microlaena stipoides*, Red Grass *Bothriochloa macra*, Blueberry Lily *Dianella longifolia*, and Common Woodruff *Asperula conferta.*

Southern Lower Floodplain Freshwater Wetland

The wetland community was present within dams across the site. The community primarily consisted of aquatic vegetation with a high abundance of exotic grasses present along the dam edges. Native species included Brahmi *Bacopa monnieri, Juncus usitatus*, *Marsilea mutica*, Tall Spike Rush *Eleocharis sphacelata* Bullrush *Typhya orientalis*, and Water Primrose *Ludwigia peploides* subsp. *montevidensis*. Exotic species included Sharp Rush *Juncus acutus*, African Love Grass *Eragrostis curvula*, Paspalum *Paspalum dilatatum* and Kikuyu *Cenchrus clandestinus.*

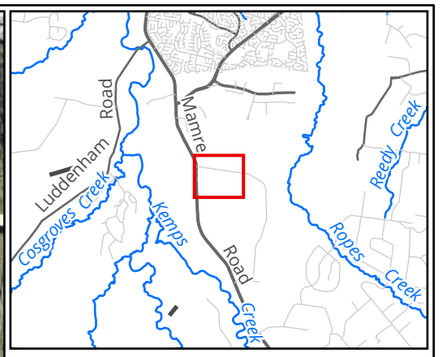
Coastal Valleys Riparian Forest.

The community was recorded in low condition within the subject land due to a low level of native diversity and high abundance of exotic species. The community primarily represented by a dominant canopy of Swamp Oak *Casuarina glauca*. The recorded community was devoid of a native mid and group layer stratum.

Non-native vegetation

The recorded non-native vegetation type is a direct result of the planting of horticultural specimens that would have surrounded the now demolished residential house. Flora species recorded within the vegetation type included Lemon-scented Gum *Corymbia citriodora,* Honey Locust *Gleditsia triacanthos,* Scotch elm *Ulmus glabra* and Bangalay *Eucalyptus botryoides,* Fishpole Bamboo Phyllostachys aurea and Cat's claw creeper *Dolichandra unguis-cati.*

Non-native vegetation also includes areas of exotic pasture dominated by *Briza subaristata*, Narrow-leafed Carpet Grass *Axonopus fissifolius*, Kikuyu Grass *Cenchrus clandestinus*, Paspalum *Paspalum dilatatum*, Panic Veldtgrass *Ehrharta erecta.* Other weeds recorded within the vegetation type included Flaxleaf Fleabane *Conyza bonariensis*, Spear Thistle *Cirsium vulgare*, Saffron Thistle *Carthamus lanatus* and Chilean Needle Grass. *Nassella neesiana.*



Legend

- Study area

Plant community types

- 3320 - Cumberland Shale Plains Woodland
- 3975 - Southern Lower Floodplain Freshwater Wetland
- 4023 - Coastal Valleys Swamp Oak Riparian Forest
- Non-native vegetation

Figure 2 Native vegetation within the study area

0 50 100 150

Metres

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Scale: 1:3,600 @ A3

Coordinate System: GDA2020 MGA Zone 56

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Matter: 43542, Date: 16 October 2025,
Prepared for: CW, Prepared by: JB, Last edited by: jbeckius
Location: P:\43500s\43542\Mapping\
43542_MamreRd_KempCrk_WeedMgmtPlan.aprx
Layout: 43542_F2_PCTs

4.2 NSW Priority weed species and Weeds of National Significance

Nine NSW priority weed species for Greater Sydney Local Land Services region (which includes the Penrith City Council) as well as Weeds of National Significance (WoNS) that have been recorded in the study area are listed in Table 1 below, along with their associated biosecurity duty (where relevant to the project). Weed management measures are outlined in Appendix 2.

Table 1 NSW Priority weed species and WoNS recorded within the study area

Scientific name	Common name	General biosecurity duty	WoNS
Asparagus asparagoides	Bridal Creeper	General Biosecurity Duty	Yes
Cestrum parqui	Green Cestrum	Regional Recommended Measure Land managers should mitigate the risk of the plant being introduced to their land. Land managers should mitigate spread of the plant from their land. A person should not buy, sell, move, carry or release the plant into the environment.	No
Dolichandra unguis-cati	Cat's Claw Creeper	General Biosecurity Duty	Yes
Dovyalis afra	Kei apple	Regional Recommended Measure: Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.	No
Lycium ferocissimum	African boxthorn	General Biosecurity Duty	Yes
Nassella neesiana	Chilean needle grass	General Biosecurity Duty	Yes
Olea europaea* subsp. *cuspidata	African Olive	Regional Recommended Measure: *Exclusion zone (Blue Mountains City Council LGA and Penrith LGA west of the Nepean River) and core infestation area.* The plant is eradicated from the land and the land kept free of the plant. Land managers should mitigate the risk of new weeds being introduced to their land. Land managers prevent spread from their land where feasible. Land managers reduce impacts from the plant on priority assets.	No
***Rubus fruticosus* sp. agg.**	Blackberry	General Biosecurity Duty	Yes
Senecio madagascariensis	Fireweed	General Biosecurity Duty	Yes

To prevent biosecurity impacts from occurring as a result of the presence of the above listed (or any other) NSW Priority weed species or WoNS within the study area, all practical steps should be taken to control and eradicate the weeds from the study area prior to or during vegetation removal.

A full list of NSW Priority weed species can be found here https://weeds.dpi.nsw.gov.au/

A full list of WoNS can be found here https://weeds.org.au/lists/established/

5 Weed management strategy

5.1 Specific management actions

5.1.1 Site inductions

Supervisors are required to identify all potential environmental impacts and implement and maintain control measures, procedures and constraints, accordingly, these should be documented as part of a Construction Environmental Management Plan (CEMP) or similar. General site inductions must also include strict hygiene protocols to reduce the potential the introduction of invasive flora into the study area.

5.1.2 Erosion and sediment controls

Earthworks are not to commence until sediment and erosion controls have been installed as per an approved Erosion and Sediment Control Plan and/or Soil and Water Management Plan. Erosion and sediment control is to be observed and monitored for the entire construction phase of the development. All objectives and measures outlined within Landcom's *Managing Urban Stormwater: Soils and Construction* (2004) this WEMP and any Sediment and Erosion Control Plan prepared for the development are to be enforced.

5.2 Weed control methodologies

5.2.1 General approach

General weed management measures to be undertaken prior to and during programmed civil works and construction phases of the project include:

- The use a range of weed management methods such as slashing or mowing (physical and mechanical control) as well as a range of herbicides (to avoid herbicide resistance).
- All untreated weed biomass and weed contaminated soil propagules are disposed of at an appropriate waste management facility.
- Mow/slash areas infested with weeds before flowering and fruiting events.
- Employ appropriate vehicle hygiene, including:
  - Clean machinery, vehicles and footwear before moving to a new location.
  - Securely cover loads of weed-contaminated material.
  - Dispose of weed contaminated soil at an appropriate waste management facility.
  - Remove weeds immediately and dispose of without stockpiling.
  - Separate weeds from native vegetation to be mulched – do not use weeds for mulch.
  - Minimise soil disturbance in weed infested areas.

Weed control methods adopted in the implementation of this WEMP are based on a combination of the current site management, land management industry standards and botanical knowledge of the recorded weed species.

Techniques and methods recommended in the publication *Noxious and Environmental Weed Control Handbook. A Guide to Weed Control in Non-crop, Aquatic and Bushland Situations, 5th Edition* (DPI, 2016) provide descriptions on general and standard weed control methods.

Species specific control for NSW Priority weed species and WoNS recorded within the WEMP area are provided in Table 5 in Appendix 2. Locations and densities of the key exotic plant species are provided as Figure 3.

5.3 Phases of weed management

To successfully implement this WEMP, the management of exotic flora within the study area has been strategically divided into four different phases to coincide with key developmental stages of the proposed project being :

- Pre-civil works phase.
- Civil works phase.
- Construction phase.
- Post construction phase.

5.3.1 Pre-civil works phase

Weed management activities within the pre-civil works phase will involve the following actions:

- Flagging locations of known Chilean needle grass highlighting them as no -go areas in preparation for ongoing treatment.
- Treatment of recorded NSW priority weed species and WoNS prior to the commencement of civil earthworks in accordance with the recommended treatment methods provided as Table 5.
- Monitor for newly germinating/seasonally available NSW priority weed species and WoNS.

The duration, specific management action and required performance criteria associated with the pre -civil works phase is provided as Table 2.

5.3.2 Civil works phase.

Weed management activities within the civil works phase will involve the following actions:

- Establishment of grated entrances to manage soil movement during entry and exit of the site.
- Providing truck wheel wash facilities and bunded washdown bays for civil earthmoving equipment/plant and light vehicles.
- Provide designated areas for soil and biomass stockpile locations. Stockpile areas are to be adequately bunded with silt fencing where appropriate.
- Continued treatment of NSW Priority weed species and WoNS (Table 5) throughout the study area with a focus on the key areas of weed seed vector routes and potential germination locations, such as:
  - Main access routes within the study area.
  - Allocated soil and biomass stockpile areas.

    - Wheel wash, grated access locations, soil and biomass stockpiles, bunded wash bays and surrounds, water detention basins, plant hard stand and parking areas.
- Monitor site for new and /or introduced weed species in key areas of weed seed vector routes and potential germination locations.
- On site soil to be reused on site where possible to limit transportation of weed seed and propagules outside of the site.

Soil movement and stockpile management during civil works are to be undertaken in general accordance with the following strategies:

- Scrape and stockpile O and A horizon soil in areas determined to be infested with NSW Priority weed species and WoNS during pre-clearing surveys.
- Stockpile weed infested soil in bunded area, and regularly treat germinating weeds with herbicide to exhaust reproductive material.
    - If herbicide treatment of weeds in the topsoil is required, spot herbicide treatment should only be used (rather than blanket herbicide spraying) in accordance with Table 5.
- Weed infested soil must not be stockpiled adjacent to native vegetation.
- Soil exhausted of viable weed propagules and other reproductive material can be reused on site.
- Any re-used soil should be monitored and treated for any future weed re-growth, and undertaken for a period of weeks to months prior to installation of landscape plantings, to ensure maximum exhaustion of the exotic seedbank.
- The generated topsoil should be covered by geofabric material or similar (as required) and surrounded by appropriate soil erosion controls consistent with measures outlined within Landcom Managing Urban Stormwater: Soils and Construction (Landcom 2004) to minimise soil loss and potential dust pollution during high wind and rainfall events.
- The topsoil stockpile(s) are to be included in all induction material for the construction phase and appear on relevant stockpile and material tracking maps.
- Topsoil stockpiles are to be inspected for weed propagules and germinating plants by the weed control contractor, and treated as necessary, during the life of the project.

The duration, specific management actions and required performance criteria associated with the civil works phase is provided as Table 2.

5.3.3 Construction phase.

Weed management activities within the construction phase will involve the following actions:

- Continued treatment of NSW Priority weed species and WoNS throughout the study area with a focus on the key areas of weed seed vector routes and potential germination locations, such as:
    - Main access routes within the study area.
    - Allocated soil and biomass stockpile areas.
    - Wheel wash, grated access locations, soil and biomass stockpiles, bunded wash bays and surrounds, water detention basins, plant hard stand and parking areas.

- Monitor site for new and /or introduced weed species in key areas of weed seed vector routes and potential germination locations. This will include any potential landscape areas within the development footprint.

The duration, specific management actions and required performance criteria associated with the construction phase is provided as Table 2.

5.3.4 Post construction phase.

The post construction phase directly relates to the ongoing maintenance of the newly constructed planted and landscaped areas. It is anticipated that this will be undertaken via scheduled maintenance program.

Weed management activities within the post construction works phase will involve the following actions:

- Monitor site for new and /or introduced weed species
- Undertake weed control via a landscape maintenance program to control weed seed distribution and establishment within the study area.

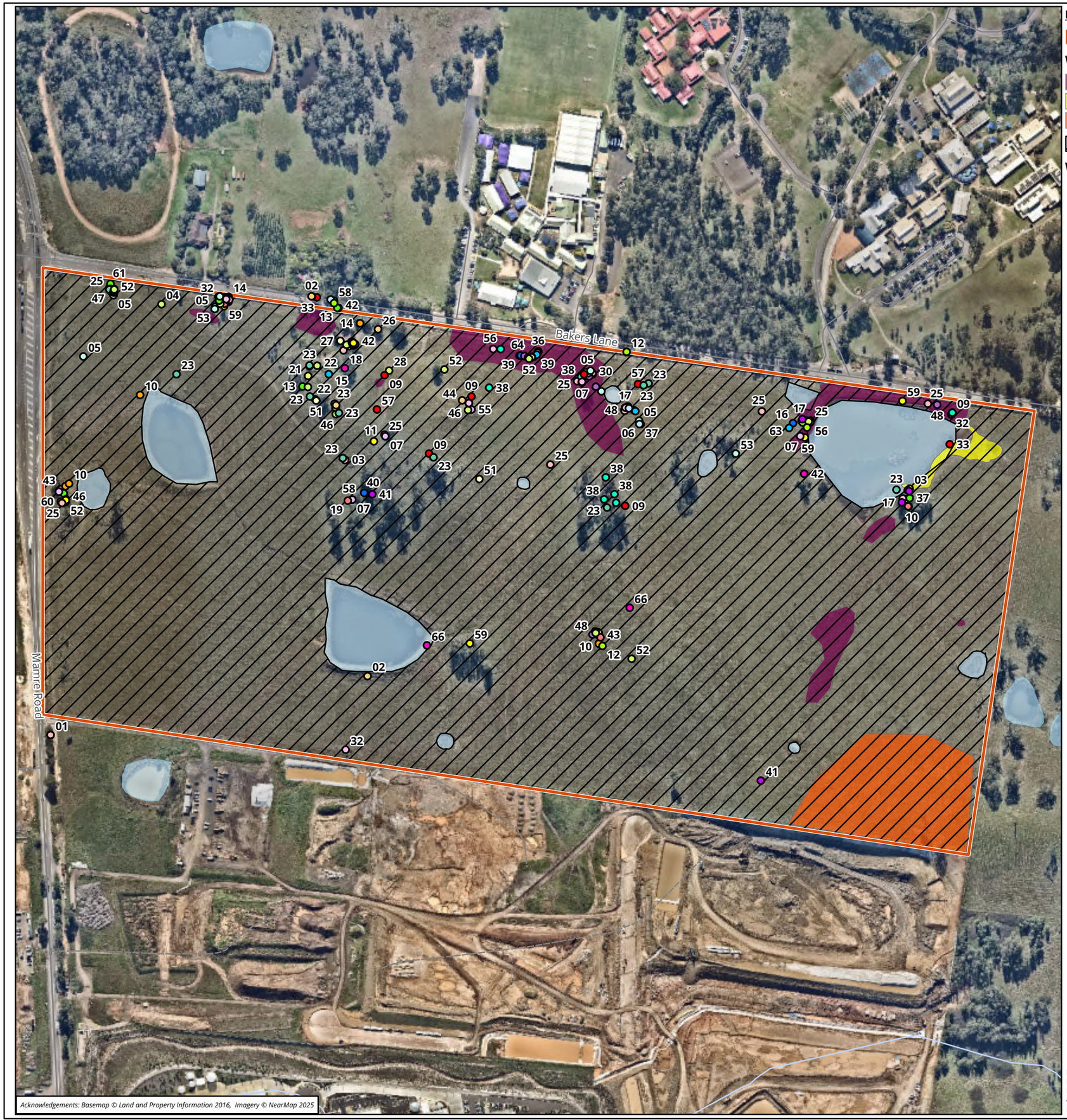
5.3.5 Monitoring

Monitoring of NSW Priority weed species and WoNS is to be undertaken and evaluated against performance targets, to ensure the management measures in this WEMP are implemented and performance criteria are satisfied. The monitoring program will commence at the pre-construction phase and continue for the operation period, i.e. during and post construction of the project. Details of the monitoring program are included in Section 8.

5.3.6 Adaptive management

An adaptive management approach is to be employed for the works forming part of this WEMP. This approach involves an integrated process of monitoring, reviewing, and then responding to the status of the NSW Priority weed species and WoNS to identify any alterations to the design and maintenance of works that may be required to ensure the objectives of the WEMP are achieved.

It is important to note that any changes should comply with the aims of this WEMP and any licensing or approval conditions issued before implementation. An Adaptive Management Statement (or similar) will be prepared and signed by both parties prior to implementation of any adaptive management actions.



Legend

Study area

Weed community

- *Eragrostis curvula* - African Lovegrass
- *Juncus acutus*
- *Nassella neesiana* - Chilean Needle Grass
- *Senecio madagascariensis* - Fireweed

Weed individuals

- *Araujia sericifera* - Moth Vine - 01
- *Arctotheca calendula* - Capeweed - 02
- *Asparagus asparagoides* - Bridal Creeper - 03
- *Aster subulatus* - Wild Aster - 04
- *Axonopus fissifolius* - Narrow-leafed Carpet Grass - 05
- *Briza minor* - Shivery Grass - 06
- *Briza subaristata* - 07
- *Bromus catharticus* - Praire Grass - 08
- *Carthamus lanatus* - Saffron Thistle - 09
- *Cenchrus clandestinus* - Kikuyu Grass - 10
- *Centaurium erythraea* - Common Centaury - 11
- *Cerastium glomeratum* - Mouse-ear Chickweed - 12
- *Cestrum parqui* - Green Cestrum - 13
- *Chloris gayana* - Rhodes Grass - 14
- *Cinnamomum camphora* - Camphor Laurel - 15
- *Cirsium vulgare* - Spear Thistle - 16
- *Conyza bonariensis* - Flaxleaf Fleabane - 17
- *Conyza canadensis var. canadensis* - Canadian Fleabane - 18
- *Corymbia citriodora* - Lemon-scented Gum - 19
- *Cyclospermum leptophyllum* - Slender Celery - 20
- *Cyperus eragrostis* - Umbrella Sedge - 21
- *Dolichandra unguis-cati* - 22
- *Dovyalis caffra* - Kei Apple - 23
- *Ehrharta erecta* - Panic Veldtgrass - 24
- *Eragrostis curvula* - African Lovegrass - 25
- *Eschscholzia californica* - California Poppy - 26
- *Gamochaeta spp.* - 27
- *Gleditsia triacanthos* - Honey Locust - 28
- *Gomphocarpus fruticosus* - Narrow-leaved Cotton Bush - 29
- *Hypericum perforatum* - St. Johns Wort - 30
- *Hypochaeris albiflora* - White Flatweed - 31
- *Hypochaeris radicata* - Catsear - 32
- *Juncus acutus subsp. acutus* - Sharp Rush - 33
- *Lepidium africanum* - Common Peppercress - 34
- *Ligustrum lucidum* - Large-leaved Privet - 35
- *Linum trigynum* - French Flax - 36
- *Lotus angustissimus* - Slender Birds-foot Trefoil - 37
- *Lycium ferocissimum* - African Boxthorn - 38
- *Lysimachia arvensis* - Scarlet Pimpernel - 39
- *Medicago polymorpha* - Burr Medic - 40
- *Modiola caroliniana* - Red-flowered Mallow - 41
- *Nassella neesiana* - Chilean Needle Grass - 42
- *Olea europaea subsp. cuspidata* - African Olive - 43
- *Onopordum acanthium subsp. acanthium* - Scotch Thistle - 44
- *Paronychia brasiliana* - Chilean Whitlow Wort, Brazilian Whitlow - 45
- *Paspalum dilatatum* - Paspalum - 46
- *Phyllostachys aurea* - Fishpole Bamboo - 47
- *Plantago lanceolata* - Lamb's Tongues - 48
- *Richardia stellaris* - 49
- *Romulea rosea var. australis* - Onion Grass - 50
- *Rubus anglocandicans* - Blackberry - 51
- *Senecio madagascariensis* - Fireweed - 52
- *Senecio pterophorus* - 53
- *Setaria parviflora* - 54
- *Sherardia arvensis* - Field Madder - 55
- *Sida rhombifolia* - Paddy's Lucerne - 56
- *Solanum sisymbriifolium* - 57
- *Sonchus oleraceus* - Common Sowthistle - 58
- *Sporobolus africanus* - Parramatta Grass - 59
- *Stachys arvensis* - Stagger Weed - 60
- *Stellaria media* - Common Chickweed - 61
- *Taraxacum officinale* - Dandelion - 62
- *Trifolium campestre* - Hop Clover - 63
- *Trifolium dubium* - Yellow Suckling Clover - 64
- *Ulmus glabra* - 65
- *Verbena bonariensis* - Purpletop - 66

Figure 3 NSW Priority and environmental weeds

0 50 100 150 200

Metres

Scale: 1:4,300 @ A3

Coordinate System: GDA2020 MGA Zone 56

N

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Matter: 43542, Date: 16 October 2025,
Prepared for: JC, Prepared by: JB, Last edited by: jbeckius
Location: P:\43500s\43542\Mapping\
43542_MamreRd_KempCrk_WeedMgmtPlan.aprx
Layout: 43542_F3_Weeds

6 Strategic weed management actions

Table 2 Vegetation management actions and performance criteria

Weed management phase	Responsibility	Task / performance criteria	Timing
Pre-civil works phase	Vegetation management consultant	• Collection of baseline data consisting of: – Inventory of dominant weed species throughout the site with a strong focus on NSW Priority weed species and WoNS – Mapping the distribution across the site with scope to provide a basic scope of works (SoW) for weed control • Flagging/fencing locations of known populations of Chilean needle grass highlighting them as no -go areas in preparation for ongoing treatment.	Baseline data collated as a part of this report. Prior to treatment.
	Weed control contractor	• Treatment of all recorded NSW Priority weed species and WoNS in accordance with the recommended treatment methods provided as Table 5. • 95% of all recorded NSW Priority weed species and WoNS are treated prior to the comment of civil works. • Sign off of the successful treatment of the Chilean needle grass is required prior to the commencement of civil works.	As specified adjacent. From the outset of vegetation management program. Prior to the commencement of the civil works program.
	Vegetation management consultant	• Monitor for newly germinating/seasonally available NSW Priority weed species and WoNS.	As specified adjacent. From the outset of vegetation management program.
Civil works phase	Civil works contractor	• Establishment of grated entrances to manage soil movement during entry and exit of the site. • Providing truck wheel wash facilities and bunded washdown bays for civil earthmoving equipment/plant and light vehicles. • Provide designated areas for soil and biomass stockpile locations. Stockpile areas are to be adequately bunded with silt fencing where appropriate.	At the commencement of civil works (site establishment).
Civil works phase	Civil works contractor/site foreman	• Where applicable, on-site soil to be reused on site where possible to limit transportation of weed seed and propagules outside of the site.	During the civil works phase

Weed management phase	Responsibility	Task / performance criteria	Timing
		• Biomass generated from weed control works and civil work is to be removed from site (where applicable).	
Civil works phase	Weed control contractor	• Continued treatment of NSW Priority weed species and WoNS throughout the study area with a focus on the key areas of weed seed vector routes and potential germination locations, such as: – Main access routes within the study area. – Allocated soil and biomass stockpile areas. – Wheel wash, grated access locations, soil and biomass stockpiles, bunded wash bays and surrounds, water detention basins, plant hard stand and parking areas. • All NSW Priority weed species and WoNS continuously suppressed and/or eradicated over the duration of the civil works phase.	Monthly treatments of NSW Priority weed species and WoNS in key areas of weed seed vector routes and potential germination locations for the duration of the civil works phase. Frequency of treatments can be reduced if key performance measures can still be met.
Civil works phase	Vegetation management consultant	• Monitor site for new and /or introduced weed species in key areas of weed seed vector routes and potential germination locations, and elsewhere as required. • Monitor effectiveness of weed control works across the site.	6 monthly site inspections undertaken by vegetation management consultant followed by an email to site's project manager of the results.
Construction phase	Weed control contractor	• Continued treatment of NSW Priority weed species and WoNS throughout the study area with a focus on the key areas of weed seed vector routes and potential germination locations	Bimonthly treatments or as directed by vegetation management consultant or site foreman.
	Vegetation management consultant	• Monitor site for new and /or introduced weed species in key areas of weed seed vector routes and potential germination locations, and elsewhere as required. • This will include any potential landscape areas within the development footprint.	6 monthly site inspections undertaken by vegetation management consultant over the duration of the phase. Each inspection is followed by an brief email to site's project manager providing the results of the inspection.
Post construction phase	Site manager (and relevant contracted specialists)	• Monitor site for new and /or introduced weed species • Undertake weed control via a landscape maintenance program to control weed seed distribution and establishment within the study area.	As required once occupancy certificate has been provided.

7 Biosecurity Protocol

7.1 Site inductions and toolbox talks

The presence of weeds within the study area are to be addressed at a project level during project inductions, and the biosecurity protocol below is to be presented to all contractors and its requirements made clear. Toolbox talks are to discuss specific biosecurity issues and requirements.

7.2 Biosecurity hygiene protocol

All contractors are to follow the biosecurity hygiene protocol in Table 3 during all project phases outlined in Section 5.3.

Table 3 Biosecurity hygiene protocol

Timing	Hygiene protocol	Risk reduction
Prior to vegetation clearing	• Presence of NSW Priority weed species and WoNS within the study area are to be discussed during toolbox talks (where applicable). • Tools to be cleaned free of soil and plant material prior to bringing tools to site or moving between works areas. • Vehicle/machine hygiene inspections are to be undertaken prior to works starting to determine if vehicles are free from soil and plant material. • Vehicles/machines must pass the hygiene inspection prior to works commencing. Additional cleaning may be required to achieve this. • Vehicles to be parked in designated parking spaces only. • Completed hygiene inspection forms are to be kept within the relevant vehicle/machine during the works and provided to the relevant land access officers at completion of the works. • Toolbox talks are to include information on potential presence of weeds and methods to reduce spread. • Tools to be cleaned free of soil and plant material prior to departing the study area.	Prevent import of new biosecurity items to the study area. Prevent spread of biosecurity items within or from the study area.
During construction	• Presence of NSW Priority weed species and WoNS to be discussed during toolbox talks. • Hygiene procedures above to be maintained. • Avoidance or limiting vehicle/foot traffic through areas identified as having NSW Priority weed species and WoNS present, if feasible. • Limit access between and across vegetated areas to formed roads wherever practicable. • Minimise entry and exit points to/from sites determined as supporting NSW Priority weed species and WoNS. • Vehicle/machine wash down and completion of hygiene inspection must be undertaken prior to accessing a new vegetation clearing site. • Regular visual checks of PPE and vehicle tyres for plant parts and seed. • All plant material and soil found on PPE and/or machinery to be removed and bagged and disposed of in landfill or at a registered green-waste facility.	Prevent spread of NSW Priority weed species and WoNS within study area.

Timing	Hygiene protocol	Risk reduction
Post-construction	• Personal protective equipment and clothing/waders to be brushed down, plant fragments and seeds removed, soils scrubbed from footwear, inside of vehicles cleaned. Bag detritus and seal bag before depositing at a local waste cell or waste cell collection point.	Prevent spread of NSW Priority weed species and WoNS within or from the study area.

8 Monitoring and reporting

Monitoring of NSW Priority weed species and WoNS is to be undertaken and evaluated against performance targets, to ensure the management measures in this plan are implemented and performance criteria are satisfied. Table 4 below (in conjunction with Table 2 above) identifies the monitoring requirements for this WEMP, and includes a description of the action, timing, reporting requirements, responsibilities, performance parameters and assessment criteria.

The monitoring program will include:

- Initial mapping of biosecurity items, high-risk areas, and sensitive receivers during pre-construction surveys and regular site inspections.
- Regular site inspections to map the occurrence of NSW Priority weed species and WoNS within the study area from commencement of site works to practical completion.
- Reports to relevant site project manager outlining the results of each monitoring inspection against biosecurity risk management objectives.
- Recommendations to undertake additional measures should these be identified as required during site inspections.
- Recommendations for corrective measures and/or revised biosecurity risk management techniques as a result of site response to the works specified herein or other factors such as climatic conditions.
- Monitoring reports are also to be sent to Penrith City Council.

Table 4 Biosecurity risk monitoring schedule and performance indicators

Action	Description	Timing of action	Reporting	Responsibility	Performance indicators
Baseline mapping of NSW Priority weed species and WoNS	Map baseline occurrences of NSW Priority weed species and WoNS risk zones during pre-clearance surveys.	Undertaken as part of the current assessment.	Baseline mapping is provided in the current report.	Vegetation management consultant	Baseline monitoring undertaken no less than three weeks prior to planned clearing. Undertaken as part of the current assessment. Weeds mapping is shown in Figure 3.
Implementation of monitoring events	Regular site inspections to undertake NSW Priority weed species and WoNS management monitoring to include updated biosecurity risk occurrence mapping and photo monitoring.	Quarterly from commencement of site works until practical completion.	Provide report outlining current state of biosecurity risks within the study area. Highlight any areas where occurrence has increase since previous inspection.	Vegetation management consultant	Indicators of success of the weed management procedures include: • A reduction in the occurrence of NSW Priority weed species and WoNS infestations within the study area. Targets will be specified following the baseline mapping. • No new occurrences of NSW Priority weed species and WoNS within the study area.
Reporting	Provide feedback on the success of NSW Priority weed species and WoNS management measures to the Environmental Manager and recommendations for improvements where required.	As part of regular monitoring inspection reports.	Assessment of the success of current measures and recommendation for improves where required.	Vegetation management consultant	Management measures are changed where assessed as requiring improvement. No new occurrences of priority weed within project footprint.

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Appendices

Appendix 1 Weed species recorded in preparation WEMP

Status	Scientific name	Common name
	Araujia sericifera	Moth Vine
	Arctotheca calendula	Capeweed
P, WoNS	*Asparagus asparagoides*	Bridal Creeper
	Aster subulatus	Wild Aster
	Axonopus fissifolius	Narrow-leafed Carpet Grass
	Briza minor	Shivery Grass
	Briza subaristata	
	Bromus catharticus	Praire Grass
	Carthamus lanatus	Saffron Thistle
	Cenchrus clandestinus	Kikuyu Grass
	Centaurium erythraea	Common Centaury
	Cerastium glomeratum	Mouse-ear Chickweed
P	*Cestrum parqui*	Green Cestrum
	Chloris gayana	Rhodes Grass
	Cinnamomum camphora	Camphor Laurel
	Cirsium vulgare	Spear Thistle
	Conyza bonariensis	Flaxleaf Fleabane
	Conyza canadensis var. *canadensis*	Canadian Fleabane
Ni	*Corymbia citriodora*	Lemon-scented Gum
	Cyclospermum leptophyllum	Slender Celery
	Cyperus eragrostis	Umbrella Sedge
P, WoNS	*Dolichandra unguis-cati*	Cat's claw creeper
P	*Dovyalis caffra*	Kei Apple
	Ehrharta erecta	Panic Veldtgrass
	Eragrostis curvula	African Lovegrass
	Eschscholzia californica	California Poppy
	Gamochaeta spp.	
	Gleditsia triacanthos	Honey Locust
	Gomphocarpus fruticosus	Narrow-leaved Cotton Bush
	Hypericum perforatum	St. Johns Wort
	Hypochaeris albiflora	White Flatweed
	Hypochaeris radicata	Catsear
	Juncus acutus subsp. *acutus*	Sharp Rush
	Lepidium africanum	Common Peppercress
	Ligustrum lucidum	Large-leaved Privet
	Linum trigynum	French Flax
	Lotus angustissimus	Slender Birds-foot Trefoil

Status	Scientific name	Common name
P, WoNS	*Lycium ferocissimum*	African Boxthorn
	Lysimachia arvensis	Scarlet Pimpernel
	Medicago polymorpha	Burr Medic
	Modiola caroliniana	Red-flowered Mallow
P, WoNS	*Nassella neesiana*	Chilean Needle Grass
P	*Olea europaea* subsp. *cuspidata*	African Olive
	Onopordum acanthium subsp. *acanthium*	Scotch Thistle
	Paronychia brasiliana	Chilean Whitlow Wort
	Paspalum dilatatum	Paspalum
	Phyllostachys aurea	Fishpole Bamboo
	Plantago lanceolata	Lamb's Tongues
	Richardia stellaris	
	Romulea rosea var. *australis*	Onion Grass
P, WoNS	*Rubus anglocandicans*	Blackberry
P, WoNS	*Senecio madagascariensis*	Fireweed
	Senecio pterophorus	
	Setaria parviflora	*Setaria parviflora*
	Sherardia arvensis	Field Madder
	Sida rhombifolia	Paddy's Lucerne
	Solanum sisymbriifolium	Sticky nightshade
	Sonchus oleraceus	Common Sowthistle
	Sporobolus africanus	Parramatta Grass
	Stachys arvensis	Stagger Weed
	Stellaria media	Common Chickweed
	Taraxacum officinale	Dandelion
	Trifolium campestre	Hop Clover
	Trifolium dubium	Yellow Suckling Clover
	Ulmus glabra	*Ulmus glabra*
	Verbena bonariensis	Purpletop
	Verbena incompta	*Verbena incompta*
	Vicia sativa subsp. *sativa*	Common Vetch
	Vulpia myuros	Rat's Tail Fescue

P – NSW Priority weed species, WoNS – Weed of National Significance, Ni – Non-indigenous native

Appendix 2 Weed management measures

Species specific control for NSW Priority weed species and WoNS recorded within the WEMP area are provided in Table 5.

Table 5 Relevant NSW Priority weed species and WoNS management measures

Botanical name	Common name	Initial treatment	Follow up control
-	Various annual and perennial grass and herb species	Hand remove or chemically treat (spray) deseeded mature specimens with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water (1:100)	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.
Araujia sericifera	Moth Plant	Hand remove or chemically treat (spray) deseeded mature specimens with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water (1:100). May require the use of a penetrant for effective kill rate. Fruits to be disposed off-site	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water
Asparagus asparagoides	Bridal Creeper	Hand remove in area of high regeneration potential ensure that all fruiting bodies and central rhizomes has been removed and disposed off-site or chemically treat during peak growing season (August to September) using either a Metsulfuron-methyl 600 g/kg based herbicide at a diluted rate 10 g metsulfuron-methyl to 100 L water, or a 360 g/L glyphosate based herbicide at a diluted rate of 1 part glyphosate to 50 parts water. As per APVMA approved Off label permit PER9907. Introduction of a bio-control (rust) will assist in areas of heavy infestation.	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water. All seeds and biomass are to be disposed off-site.
Cestrum parqui	Green Poisonberry, Green Cestrum	Small specimens may be scraped and painted using a "neat" 360 g/L glyphosate based herbicide in areas of high regeneration potential. Larger stands chemically treat using a Triclopyr 300 g/L + Picloram 100 g/L based product Grazon® DS late spring to early autumn.	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.
Cirsium vulgare	Spear Thistle	Flowering and fruiting bodies to be removed to reduce seed dispersal. Hand remove or chemically treat (spray) deseeded mature specimens with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water (1:100)	Germination is promoted via disturbance e.g. soil movement, fire. Monitor for seedlings. Treat prior to flower and seed set
Chloris gayana	Rhodes Grass	Hand remove Or chemically treat (spray) deseeded mature specimens with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water (1:100). May	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water

Botanical name	Common name	Initial treatment	Follow up control
		require brushcutting or slashing to promote new growth prior to application.	
Cinnamomum camphora	Camphor Laurel	Cut/paint, fill/drill and apply "neat" 360 g/L glyphosate based herbicide.	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.
Conyza bonariensis	Fleabane	Hand remove in area of high regeneration potential. Flowers and seeds to be removed and disposed of site. Remaining biomass can be composted on site on. Larger infestations can be chemically treated using a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water. Treatment prior to flowering to reduce seed set is recommended.	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.
Dolichandra unguis-cati	Cat's Claw Creeper	Cut/paint, stem scrape stems with "neat" 360 g/L glyphosate based herbicide (off-label permit: PER9907). Treatment of large infestations will require preparation prior to chemical application Firstly skirt vines on trees and vines, then apply a Triclopyr 300 g/L + Picloram 100 g/L based herbicide e.g. Grazon® DS at a diluted rate of 400 mL product per 100 L water (off-label permit: PER13014). Will require ongoing works due to aggressive nature of roots and rhizome.	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 1 part glyphosate to 50 parts water (off-label permit: PER9907).
Eragrostis curvula	African Lovegrass	Hand remove or chemically treat (spray) deseeded mature specimens with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water (1:100). May require brushcutting or slashing to promote new growth prior to application.	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water
Gleditsia triacanthos	Honey Locust	Cut/paint, Fill/drill and apply "neat" 360 g/L glyphosate based herbicide during growing season. Larger specimens may produce vegetative suckers in response treatments.	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.
Juncus acutus	Spiny Rush	Carefully hand remove small infestations where applicable. Biomass to be removed off site to reduce further proliferation. Large infestations to be brush cut and then followed with a Chemically treat (spray) with a	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water

Botanical name	Common name	Initial treatment	Follow up control
		360 g/L glyphosate based herbicide at a diluted rate of 15 mL/L of water (1:75). As per APVMA approved Off label permit PER9907	
Ligustrum lucidum	Broad-leaved Privet	Cut/paint, Fill/drill and apply "neat" 360 g/L glyphosate based herbicide during growing season.	Hand remove seedlings/shooting nodes or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.
Lycium ferocissimum	African Boxthorn	Cut/paint, scrape/paint and apply "neat" 360 g/L glyphosate based herbicide to actively growing stems in areas of in areas of high regeneration potential (off-label permit: PER9907). Larger infestations can be chemically treated by the use of a using a Triclopyr 300 g/L + Picloram 100 g/L e.g. Grazon® DS based product at a dilution rate of 500 mL per 100 L of water.	Hand remove seedlings/shooting nodes or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.
Nassella neesiana	Chilean Needle grass	Dig out single plants, biomass to remain on site. Chemically treat using either a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water (Off label permit: PER9792) or a Flupropanate 745 g/L based product at a dilution rate of 200 mL flupropanate plus 150 mL plus glyphosate 360 g/L per 100 L of water on actively growing plants.	Hand remove seedlings/shooting nodes or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.
Olea europaea subsp. Cuspidata	African Olive	Seedlings can be manually removed. Cut/paint, scrape/paint and apply "neat" 360 g/L glyphosate based herbicide to actively growing stems in areas of in areas of high regeneration potential (off-label permit: PER9907).	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water. Monitor for secondary weed incursions post removal of large monoculture infestations.
Opuntia spp.	Prickly Pears	Foliar spray using Triclopyr 600 g/L based product at a dilution rate of 3.0 L in 100 L of water. The introduction of biological controls Cochineal and Cactoblastis are suggested for large infestations.	Spot spray seedlings and or propagules.
Rubus fruticosus aggregate	Blackberry	Dig out single plants (biomass to remain on site) or scape and paint using a "neat" 360 g/L glyphosate based herbicide (off-label permit: PER9907). Chemically treat larger infestations using either a 360 g/L glyphosate based	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.

Botanical name	Common name	Initial treatment	Follow up control
		herbicide at a diluted rate of 10–13 mL per 1 L of water or a APVMA approved broad leaf selective herbicide applied at the registered rate. Slashing may be required to gain access and stimulate new growth.	
Senecio madagascariensis	Fireweed	Hand remove isolated infestation in areas of high regeneration potential. Spot spray using 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.
Solanum sisymbriifolium	Sticky nightshade	Cut/paint, scrape/paint and apply "neat" 360 g/L glyphosate based herbicide to actively growing stems in areas of in areas of high regeneration potential (off-label permit: PER9907). Spot spray with a with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.	Hand remove seedlings or spot spray with a 360 g/L glyphosate based herbicide at a diluted rate of 10 mL/L of water.


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