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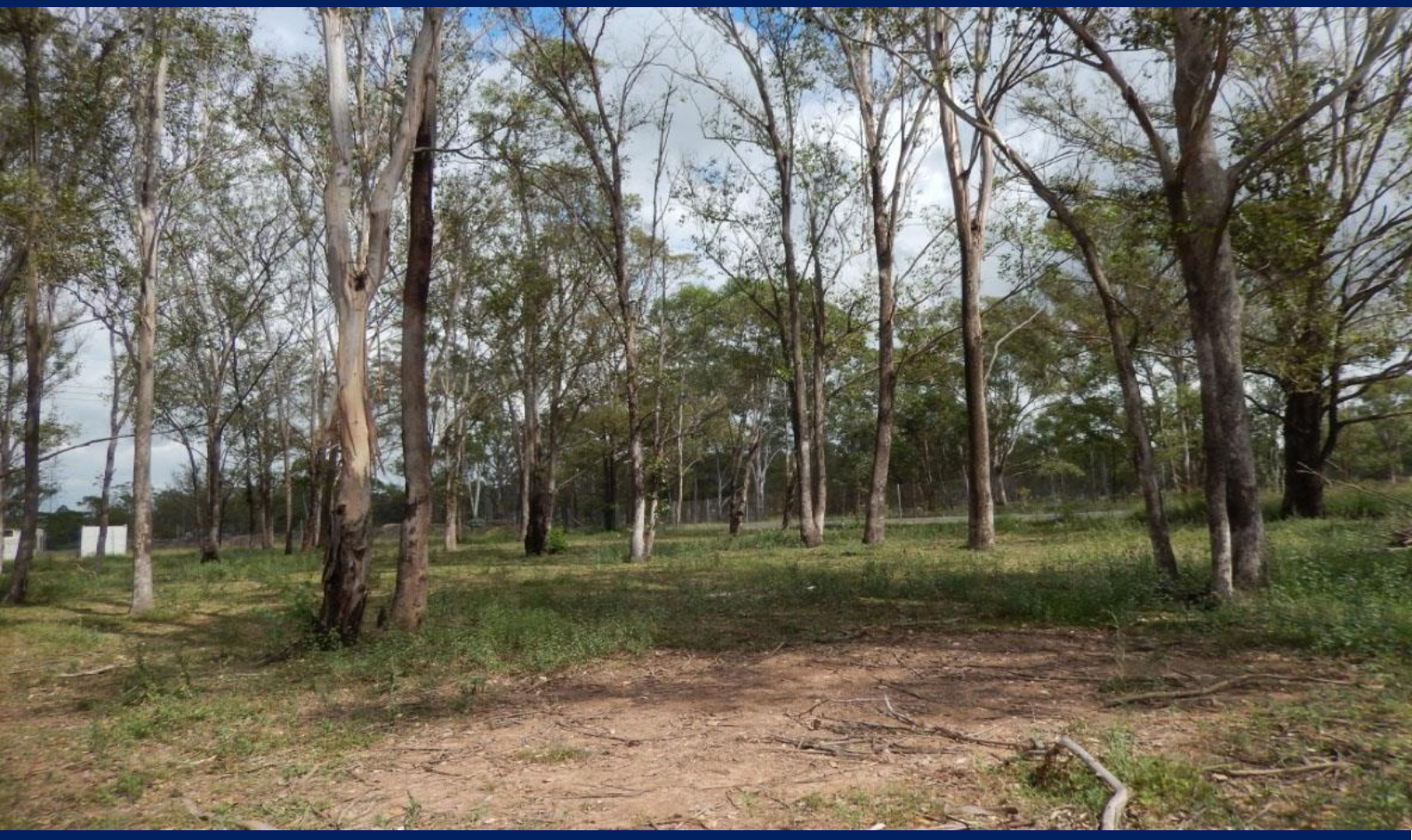
Riparian Vegetation Management Plan



Alspec Industrial Park, Luddenham Road, Orchard Hills NSW

Riparian Vegetation Management Plan

Prepared for: HBB Property

9 September 2024 Version: 1.3 .1– Final

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PROJECT NAME	Riparian Vegetation Management Plan			
PROJECT ADDRESS	Alspec Industrial Park, Luddenham Road, Orchard Hills NSW			
PREPARED FOR	HBB Property			
AUTHOR/S	Ailis Chapman, Erin Leslie			
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Glossary and abbreviations

Acronym	Description
AIBP	Alspec Industrial Business Park
BC Act	*NSW Biodiversity Conservation Act* 2016
Biodiversity Conservation SEPP	State Environmental Planning Policy (Biodiversity Conservation) 2021
Biosecurity Act	*NSW Biosecurity Act* 2015
BMP	Biodiversity Management Plan
Council	Penrith City Council
CPCP	Cumberland Plain Conservation Plan 2022
DA	Development Application
DPE	NSW Department of Planning and Environment
DPIE	NSW Department of Planning, Industry and Environment
EPBC Act	*Commonwealth Environment Protection and Biodiversity Conservation Act* 1999
ha	Hectares
HBT	Habitat Trees
HTW	High Threat Weed
LGA	Local Government Area
PCT	Plant Community Type
Subject lot	The lot that contains the development footprint that would be directly impacted by the proposed development.
SVTM	State Vegetation Type Map

Acronym	Description
TEC	Threatened Ecological Community. TECs is an umbrella term that comprises Vulnerable Ecological Communities (VECs), Endangered Ecological Communities (EECs) and Critically Endangered Ecological Communities (CEECs).
VRZ	Vegetated Riparian Zone
VMP	Vegetation Management Plan
VMP area	The area assessed as part of this report.
VMZ	Vegetation Management Zone
TEC	Threatened Ecological Community
ToB	Top of Bank
WoNS	Weed of National Significance
WM Act	*NSW Water Management Act 2000*

1 Introduction

1.1 Background

Ecoplanning has been engaged by HBB Property to prepare a Riparian Vegetation Management Plan (VMP) to accompany a Development Application (DA) for the proposed Bulk Earthworks and Subdivision into nine Lots, including vegetation removal, new roads, and stormwater basins (for Lot 1 // DP 1293805, 211-227 Luddenham Road Orchard Hills, Lot 2 // DP 1293805, 289-317 Luddenham Road Orchard Hills, Lot 99 // DP 1282927, 211a Luddenham Road Orchard Hills). The Riparian VMP is a requirement of the application and, as a minimum, addresses the Penrith City Council (PCC) pre-lodgement condition (PL23/0071, Penrith City Council 2023) that:

- A VMP for the riparian corridor (Avoided Land) associated with the watercourse that transverses the north-west corner of the site.

Version 1.3 of the VMP has been updated to include additional impacts in areas zoned 'Certified – Major Transport Corridor land, following a request for information from PCC and NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW).

1.2 Purpose and objectives of this VMP

The proposed works are considered a controlled activity under the *NSW Water Management Act 2000* (WM Act). Therefore, this VMP is required to meet the obligations of the WM Act and has been prepared in accordance with the *Guidelines for vegetation management plans on waterfront land* (DPE 2022a) and *Controlled activities – Guidelines for vegetation management plans on waterfront land* (DPE 2022b).

The proposed works will occur in proximity to mapped Key Fish Habitat (DPI 2024). It is understood that works will involve installation of a stormwater pipe, head wall and scour protection adjacent to the creek. The works will require a small opening of part of the bank for stormwater to flow into the creek and existing pipework. Advice received from DPI, dated 5 July 2024 (**Appendix C**), based on the above description of works suggests a Controlled Activity Approval (CAA) will more likely required, in which case a permit from NSW Fisheries is not required prior to the commencement of works. However, if a CAA is not required, then a Part 7 Permit for dredging/reclamation will be required, and an aquatic ecology assessment will be required.

The purpose of this VMP is to provide feasible management actions that will enhance and protect biodiversity in the VMP area. The primary objectives of this VMP are to:

- Protect the 4th-order watercourse from indirect impacts associated with the development,
- Promote the growth of existing native vegetation within the VMP area through management of priority and environmental weeds, assisted natural regeneration and exclusion fencing,
- Revegetate areas of exotic vegetation within the VMP area to stabilise soils and establish native plant communities,

- Provide a program of works that includes site preparation, planting regimes, weed management, timings of actions, monitoring and reporting.

A proposed water storage basin encroaches into the outer 50% of the riparian corridor. This encroachment has been offset on the north-western bank, as is allowable under the Guidelines for riparian corridors on waterfront land. This additional area, classified as 'Major Transport Corridor' land under CPCP zoning, has been incorporated into Version 1.3 of the riparian VMP (RVMP) to address a request for information from Penrith City Council.

Staging of works has been provided to guide restoration of the VMP area by a suitably qualified bushland regeneration practitioner. The VMP will be implemented over a five-year period. A cost estimate has been provided to assist in the implementation of this VMP.

1.3 Location

This Riparian VMP applies to the riparian corridor associated with the watercourse that transverses the north-west corner of the subject lot (**Figure 1.1**). The VMP area is mapped as Avoided Land under the Cumberland Plain Conservation Plan (CPCP) (DPIE 2022). Details of the subject lot, VMP area and biodiversity certification are provided in **Table 1-1** and shown in **Figure 1.1**.

All Biodiversity Certified Urban Capable Land mapped under the CPCP (DPIE 2022) will be managed under a Biodiversity Management Plan (BMP) (Ecoplanning 2024) and the Strategic Conservation Area is managed under its own VMP, both of these areas are not covered by this Riparian VMP see **Figure 1.1**.

Table 1-1: Site details.

Feature	Description
Site address	Luddenham Road, Orchard Hills NSW
Property identifier (Lot and DP)	Lot 1//DP1293805 Lot 2//DP1293805 Lot 99//DP1282927
Subject lot	125.43 ha
VMP area (the site)	6.32 ha
Local Government Area (LGA)	Penrith City Council
Zoning	C2 – Environmental Conservation
Biodiversity Certification under the CPCP	Avoided Land (2 ha) Major Transport Corridor Land (4.32 ha)

1.4 Associated proposed development

The proposed development associated with this Riparian VMP consists of bulk earth works as part of the subdivision for the Alspec Industrial Business Park (AIBP) development**.** The proposed works involve construction of a stormwater pipe and water storage basin within the waterway and riparian buffers respectively, see **Figure 2.1**.

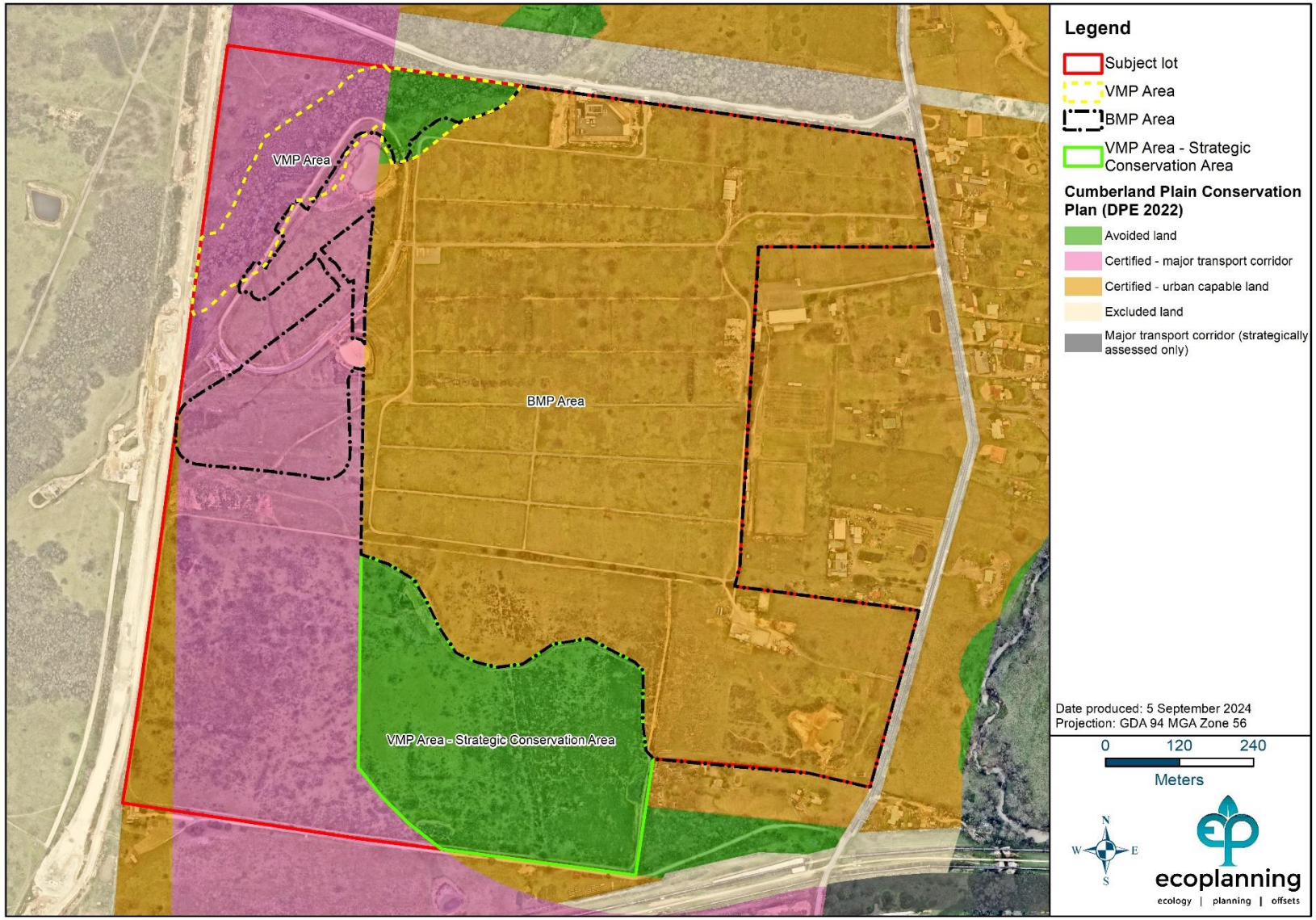

Figure 1.1: VMP area, subject lot and Cumberland Plain Conservation Plan land category mapping (DPE 2022).

1.5 Field Assessment

Field assessment results have been used to inform the management actions of this Riparian VMP.

A field survey was undertaken by Ailis Chapman (Consultant Ecologist) on 15 March 2024. The purpose of the field survey was to identify the ecological values and threats (such as Priority Weeds) present within the VMP area, validate Plant Community Types (PCTs), and determine the overall native resilience of the VMP area and its capacity to respond to regeneration work.

Previous surveys for other reports (Ecoplanning 2023b, 2023b) included a field survey on 17 August 2023 by Ailis Chapman (Consultant Ecologist) and Amy Mortell (Consultant Ecologist). This survey included vegetation type and condition mapping and a survey for potential threatened species habitat within the VMP area.

2 Existing environment

2.1 Riparian areas

The riparian corridor managed in the VMP area is an unnamed 4th order stream (**Figure 2.1**). This stream flows 2km in a northwest direction and is a tributary of South Creek / Wianamatta Creek.

A Vegetated Riparian Zone (VRZ) is required either side of a mapped watercourse, measured 40 m from top of bank (ToB) for a 4th order stream. The VRZ is considered the riparian corridor for the purposed of this VMP, see **Figure 2.1.**

Native vegetation in the riparian corridor is in good condition with minor to moderate weed incursion. Adjacent to the riparian corridor is a cleared paddock and powerline easement. Historically, the adjacent site was used for agriculture.

Adjacent to the VMP area is a proposed water storage basin that encroaches into the outer 50% riparian buffer.

The riparian corridor matrix (Table 2 in the Guidelines for riparian corridors on waterfront land) enables applicants to identify certain works and activities that can occur on waterfront land and in riparian corridors in relation to controlled activity approvals under the WM Act. Detention basins are permitted within the outer 50% VRZ for forth order streams and above.

The guidelines state that if a proposed basin will not have an equivalent VRZ for the corresponding watercourse, it may still be built in the outer 50% of the VRZ but must be offset. An offset has been nominated for areas of encroachment. Vegetation in this area will be protected and improved through implementation of the RVMP.

Table 2-1 shows the total encroachment and offset potential using the averaging rule. Although there is 0.22 ha riparian corridor encroachment due to the proposed basins, the total vegetated riparian corridor exceeds the WM Act corridor requirement due to offsetting an equivalent area and the inclusion of 'Avoided Land' outside the 40-meter TOB buffer. Thus, preserving and providing additional vegetated riparian habitat to the riparian corridor within the VMP area will improve its ecological value.

Table 2-1: Comparison of total buffer encroachment utilising the 'averaging rule'.

Description	Area (ha)
Corridor requirement (WM Act)	5.31
Impact	0.22
Offset	0.22
Total Riparian Corridor	6.32

2.2 Vegetation Communities

Field assessment validated that Plant Community Type (PCT) 4025 Cumberland Riverflat Forest occurs as one 'intact' condition class (1.1 ha) within the Riparian VMP area and the remainder of cleared vegetation was validated as 'exotic grassland' (0.9 ha), see **Figure 2.3**.

PCT 4025 occurs in an intact condition class because it is characterised by an intact native canopy, middle and ground stratum, a diverse assemblage of native species and low weed cover. PCT 4025 on site has a canopy dominated by *Eucalyptus tereticornis* (Forest Red Gum) and *E. amplifolia* (Cabbage Gum). The midstratum contains *Bursaria spinosa* (Native Blackthorn) and *Melaleuca* sp. (Tea Tree). The ground stratum consists of grasses and ferns such as *Microlaena stipoides* (Weeping Grass) with sedges and aquatic plants present in the waterway. Some weeds are present within the mid and lower stratum however they are in low density with the vegetation being native dominant.

This exotic grassland is predominately *Cenchrus clandestinus** (Kikuyu Grass) and *Chloris gayana** (Windmill Grass).

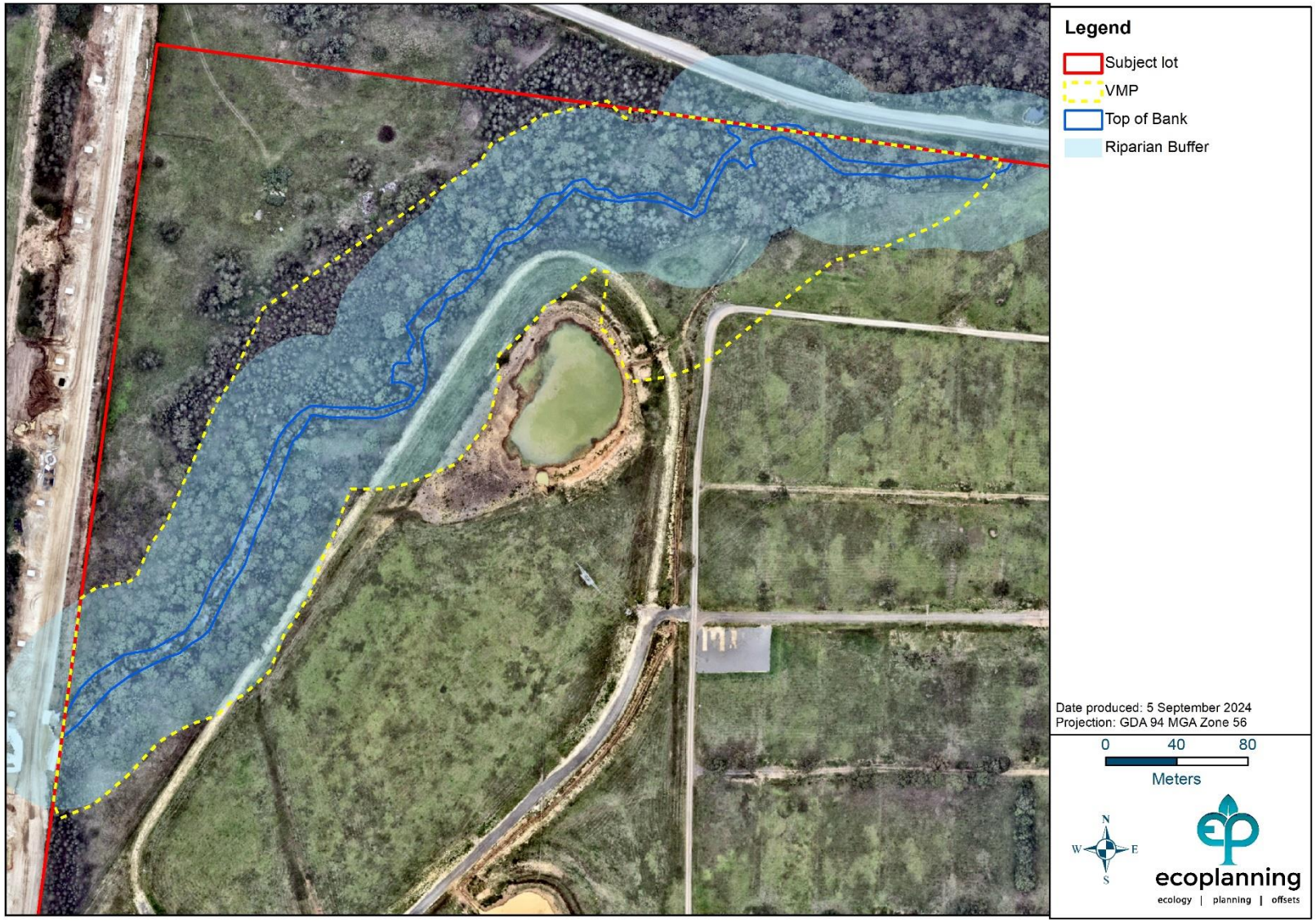

Figure 2.1: RVMP area.

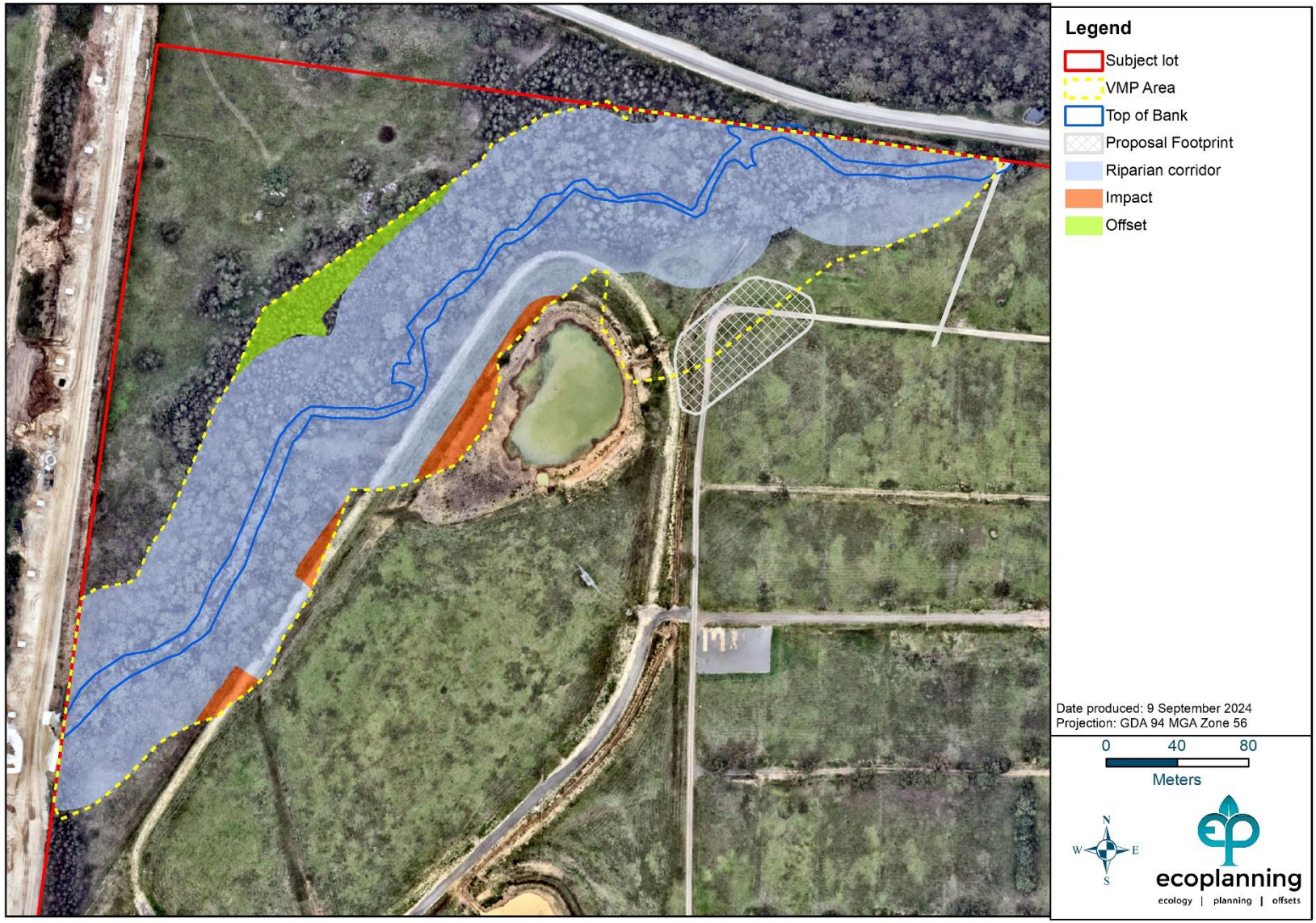

Figure 2.2: Riparian buffer encroachment within study area and associated offset areas.

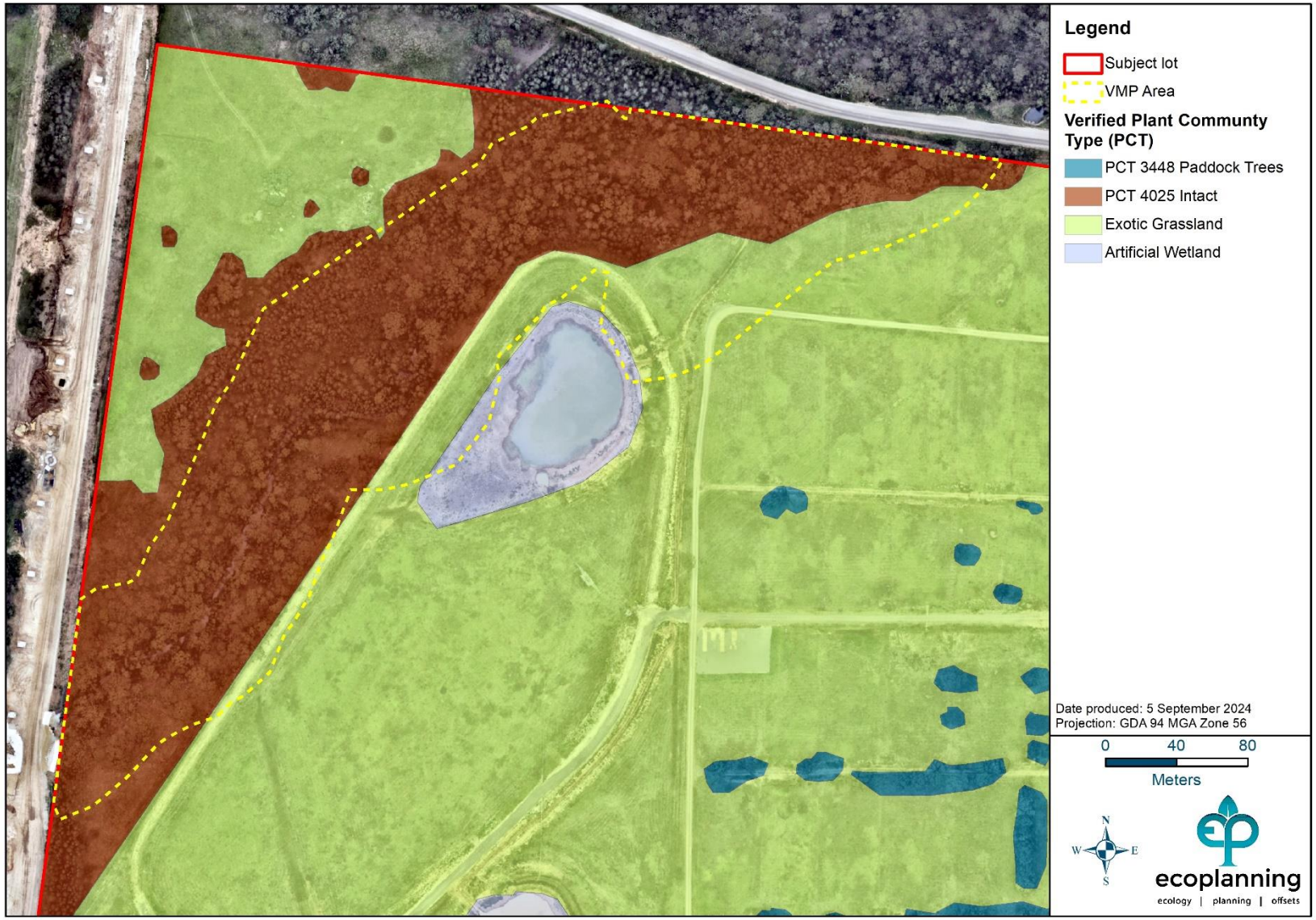

Figure 2.3: Validated vegetation (Ecoplanning 2024).

2.3 Threatened Species

During the 15 March 2024 surveys the migratory species Latham's Snipe (*Gallinago hardwickii*) which is listed as vulnerable under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), was incidentally observed, however the observation was unable to be confirmed. Regardless, the species has been deemed highly likely to occur within the Riparian VMP area.

Additionally, the following threatened fauna species were recorded on or above the subject lot during previous surveys (Ecoplanning 2023a, 2024):

- Little Eagle (*Hieraaetus morphnoides*) vulnerable under the *Biodiversity Conservation Act 2016* (BC Act)
- Cumberland Plain Land Snail (*Meridolum corneovirens*) endangered under the BC Act
- Eastern Coastal Free-tailed Bat (*Micronomus norfolkensis*) vulnerable under the BC Act
- Greater Broad-nosed Bat (*Scoteanax rueppellii*) vulnerable under the BC Act
- Eastern False Pipistrelle (*Falsistrellus tasmaniensis*) endangered under the BC Act

Targeted microbat surveys (ultrasonic monitoring) in January 2022 potentially recorded four additional threatened microbat species:

- Eastern Bent-winged Bat (*Miniopterus orianae oceanensis*) vulnerable under the BC Act
- Eastern Cave Bat (*Vespadelus troughtoni*) vulnerable under the BC Act
- Little Bent-winged Bat (*Miniopterus australis*) vulnerable under the BC Act
- Southern Myotis (*Myotis macropus*) vulnerable under the BC Act

These microbat species are considered highly likely to occur within the Riparian VMP area (Ecoplanning 2023a). Additionally, the Grey-headed Flying-fox (*Pteropus poliocephalus*) has also been deemed highly likely to occur within the Riparian VMP area (Ecoplanning 2023a).

2.4 Threatened Ecological Communities

PCT 4025 is associated with the following Threatened Ecological Community (TEC), listed in **Table 2-2**.

Table 2-2: Threatened Ecological Communities.

PCT	TEC	Listing Status	Presence within the VMP Area
PCT 4025	River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E – BC Act CE – EPBC Act	**Yes** – The PCT on site is consistent with the description listed within the final determination for this TEC including floristic composition, structure elevation and bioregion under the BC Act. The PCT also meets the key diagnostic criteria for the EPBC listing of this TEC (Ecoplanning 2023b).

CE: critically endangered, E: endangered.

2.5 Weeds

The VMP area is within the Greater Sydney Region of the *Biosecurity Act 2015*. The Biosecurity Act lists priority weeds for the region and their biosecurity duties. Weeds of National Significance (WoNS) are weed species that have been identified by the Commonwealth based on their invasiveness, potential for spread and environmental, social and economic impacts. Twenty-one (21) exotic weed species were identified during the March 2024 site survey, of which five are priority weeds and/or WoNS. These are listed in **Table 2-3** with their biosecurity duty.

For the flora inventory and other weed species see the Flora and Fauna Impact Assessment for the VMP area (Ecoplanning 2023a).

Table 2-3: Priority weed species present within the VMP area and their biosecurity duties.

Scientific Name	Common Name	Priority weed	WoNS	Biosecurity Duty
Asparagus asparagoides	Bridal Creeper	Yes	Yes	**Prohibition on certain dealings** Must not be imported into the state, sold, bartered, exchanged or offered for sale.
Lycium ferocissimum	African Boxthorn	Yes	Yes	**Prohibition on certain dealings** Must not be imported into the state, sold, bartered, exchanged or offered for sale.
Rubus fruticosus sp. agg.	Blackberry complex	Yes	Yes	**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.
Senecio madagascariensis	Fireweed	Yes	Yes	**Prohibition on certain dealings** Must not be imported into the state, sold, bartered, exchanged or offered for sale.
Cestrum parqui	Green Cestrum	Yes	No	**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.

**All pest plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.*

3 Vegetation Management Zones

The field assessment identified two Vegetation Management Zones (VMZs) in the VMP area (**Figure 3.1**). VMZs were determined on the basis of ecological character, environmental values and weed occurrences. Different management actions are required for each VMZ, which are described below.

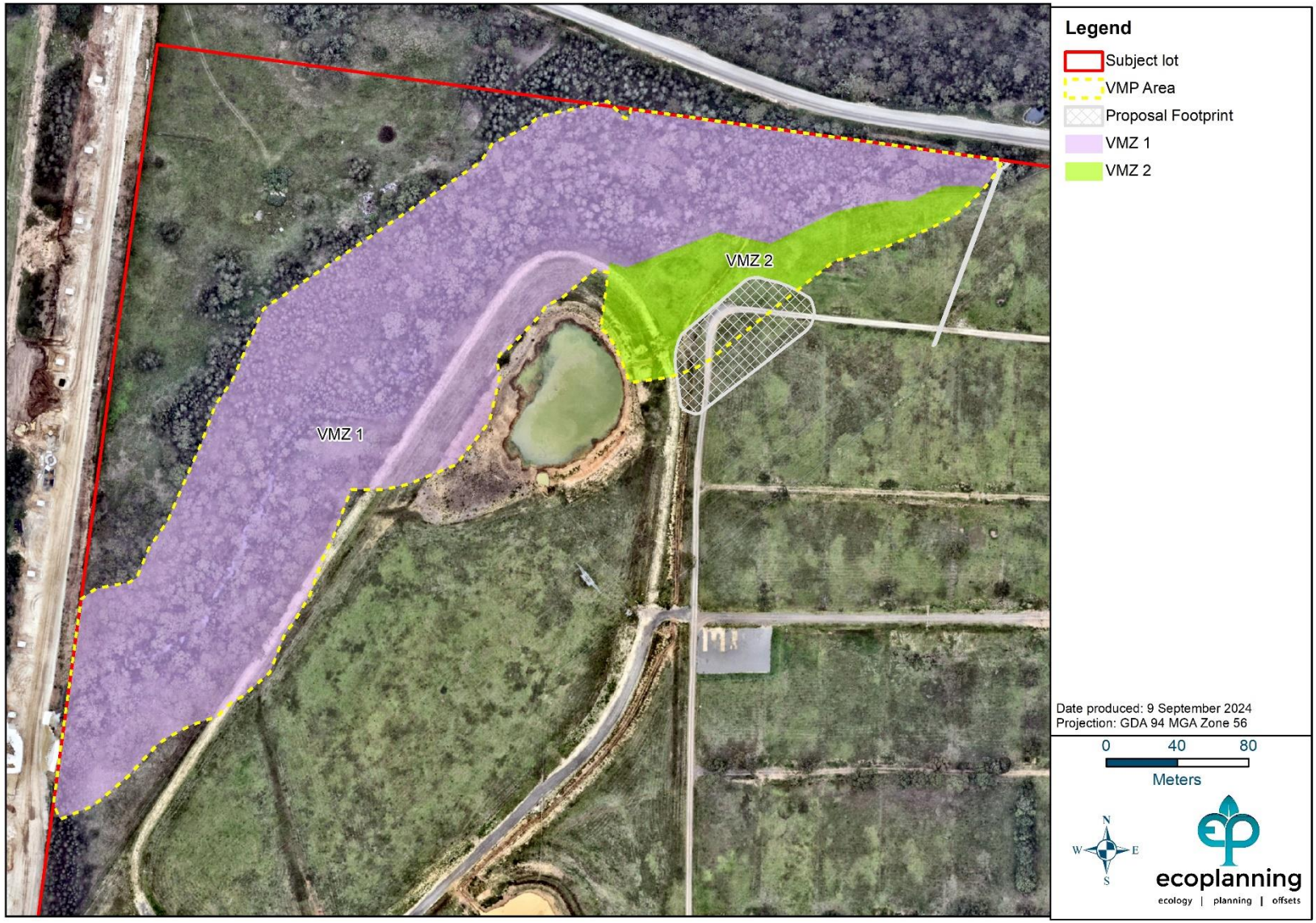

Figure 3.1: Vegetation Management Zones.

3.1 Vegetation Management Zone 1 (VMZ 1) – Riparian Area

This zone encompasses the bed and vegetated bank of the watercourse in the VMP area, including the offset area. Vegetation in VMZ1 corresponds with PCT 4025 in an intact condition class and also threatened River-Flat Eucalypt Forest (**Figure 3.2**). Overall vegetation in this zone is in good condition with minor to moderate weed incursion, mostly restricted to the edges. VMZ1 covers an area of approximately 5.46 ha.

Figure 3.2: Vegetation present within VMZ 1.

3.1.1 Weed management

Primary weed control within VMZ1 will focus on removing all woody weeds; significantly reducing priority weeds and WoNS and herbicide treatment or mechanical removal of herbaceous weeds and exotic grasses surrounding existing native vegetation. More details of preliminary weed control is provided in **Section 4.2.1**.

Secondary weed control will involve follow-up herbicide spraying of priority weeds and WoNS; follow-up herbicide treatment or mechanical removal of herbaceous weeds and exotic grasses surrounding revegetated and naturally regenerating areas. Secondary weeding should extend buffers around natural regeneration. More details of secondary weed control is provided in **Section 4.2.2**.

Maintenance works will involve herbicide spot spraying of priority weeds and WoNS following secondary weed control works. Maintenance works will also involve treating weeds emerging

in revegetated and naturally regenerating areas. More details of maintenance weed control is provided in **Section 4.2.3**.

3.1.2 Revegetation

As the zone has high native resilience with evidence of natural regeneration present, supplementary planting has not been recommended at this stage.

3.2 Vegetation Management Zone 2 (VMZ 2) – Cleared paddock

This zone encompasses the cleared paddock adjacent to the riparian vegetation (**Figure 3.3**). Vegetation in this zone is dominated by exotic grasses, no native midstory or canopy is present. The proposed basins have been excluded from this VMZ, VMZ2 covers an area of approximately 0.71 ha.

Figure 3.3: Vegetation present within VMZ 2

3.2.1 Weed management

Primary weed control within VMZ2 will focus on reducing the density of exotic grasses for planting and creating a buffer around the native bush boundary to allow natural regeneration. More details of preliminary weed control is provided in **Section 4.2.1**.

Secondary weed control will involve follow-u-p herbicide spraying of priority weeds and WoNS; follow-up herbicide treatment or mechanical removal of herbaceous weeds and exotic grasses surrounding revegetated and naturally regenerating areas. Secondary weeding should extend buffers around natural regeneration. More details of secondary weed control is provided in **Section 4.2.2**.

Maintenance works will involve herbicide spot spraying of priority weeds and WoNS following secondary weed control works. Maintenance works will also involve treating weeds emerging in revegetated and naturally regenerating areas. More details of maintenance weed control is provided in **Section 4.2.3**.

3.2.2 Revegetation

As the zone is cleared, supplementary planting is required to restore PCT 4025. Planting species and densities are listed in **Table 3-1**. More details on revegetation are provided in **Section 4.3**.

Table 3-1: VMZ2 planting list.

Scientific name	Common name	Stratum	Planting density
Eucalyptus tereticornis	Forest Red Gum	Canopy	≥1 per 20m^2
Eucalyptus amplifolia	Cabbage Gum		
Casuarina glauca	Swamp Oak		
Bursaria spinosa	Native Blackthorn	Midstory	≥1 per 5m^2
Acacia parramattensis	Parramatta Wattle		
Acacia decurrens	Black Wattle		
Breynia oblongifolia	Coffee Bush		
Melaleuca linariifolia	Flax-leaved Paperbark		
Microlaena stipoides	Weeping Grass	Understory	≥4 per 1m^2
Oplismenus aemulus	Basket Grass		
Entolasia marginata	Right-angle Grass		
Echinopogon ovatus	Forest Hedgehog Grass		
Eragrostis leptostachya	Paddock Lovegrass		
Echinopogon caespitosus	Bushy Hedgehog-grass		
Themeda triandra	Kangaroo Grass		
Dichelachne micrantha	Shorthair Plumegrass		
Dichondra repens	Kidney Weed		
Lomandra longifolia	Spiny Matrush		
Solanum prinophyllum	Forest Nightshade		
Veronica plebeia	Trailing Speedwell		
Wahlenbergia gracilis	Bluebell		
Cheilanthes sieberi subsp. *sieberi*	Rockfern		
Adiantum aethiopicum	Maidenhair fern		
Glycine tabacina	Variable Glycine		
Grona varians	Slender Tick-trefoil		
Glycine microphylla	Small-leaf Glycine		
Glycine clandestina	Twining Glycine		
Clematis glycinoides	Headache Vine		

4 Management actions

4.1 Preliminary works to avoid impacts to the VMP area

4.1.1 Permits

The proposed works are not expected to involve temporary blockage of Key Fish Habitat (KFH), however, if temporary blockage of KFH will occur, a permit will be required from NSW Fisheries prior to the commencement of works.

4.1.2 Seed collection

Collection of seed specifically for the project is not considered necessary. Plants should be sourced from a local nursery or bush regeneration company that supply high quality indigenous stock (not horticultural varieties). Species recommended for revegetation are listed in **Section 3.1.2**.

4.1.3 Fencing

Prior to commencement of works associated with the development, the construction area for the stormwater pipe and the perimeter of the VMP area will be fenced to prevent civil construction machinery and site personnel inadvertently entering the VMP area. Erosion and sediment control is to be installed to prevent any sedimentation or run-off from the development area.

Temporary fencing should be installed for the stormwater pipe and VMP area in 'Avoided Land' during construction but following construction the fencing must upgraded if necessary to last the life of this VMP. **Figure 4.1** shows approximate location of VMP fencing, this may be moved to outside the VMP area if required but cannot be moved further into the VMP area

Once the stormwater pipe is constructed, the site is to be stabilised to minimise erosion as per best practice guidelines outlined in the Landcom Blue Book (Landcom 2004). The perimeter fencing is to be closed and no machinery or site personnel are to be permitted access.

Some fencing is already present on site, this may need to be moved or extended to enclose the entire VMP area boundary. Temporary fencing is required during construction phase and fences must be maintained and remain in place for the 5-year life of this VMP.

Fencing must be at minimum 2.4m high to prevent unauthorised access and dumping.

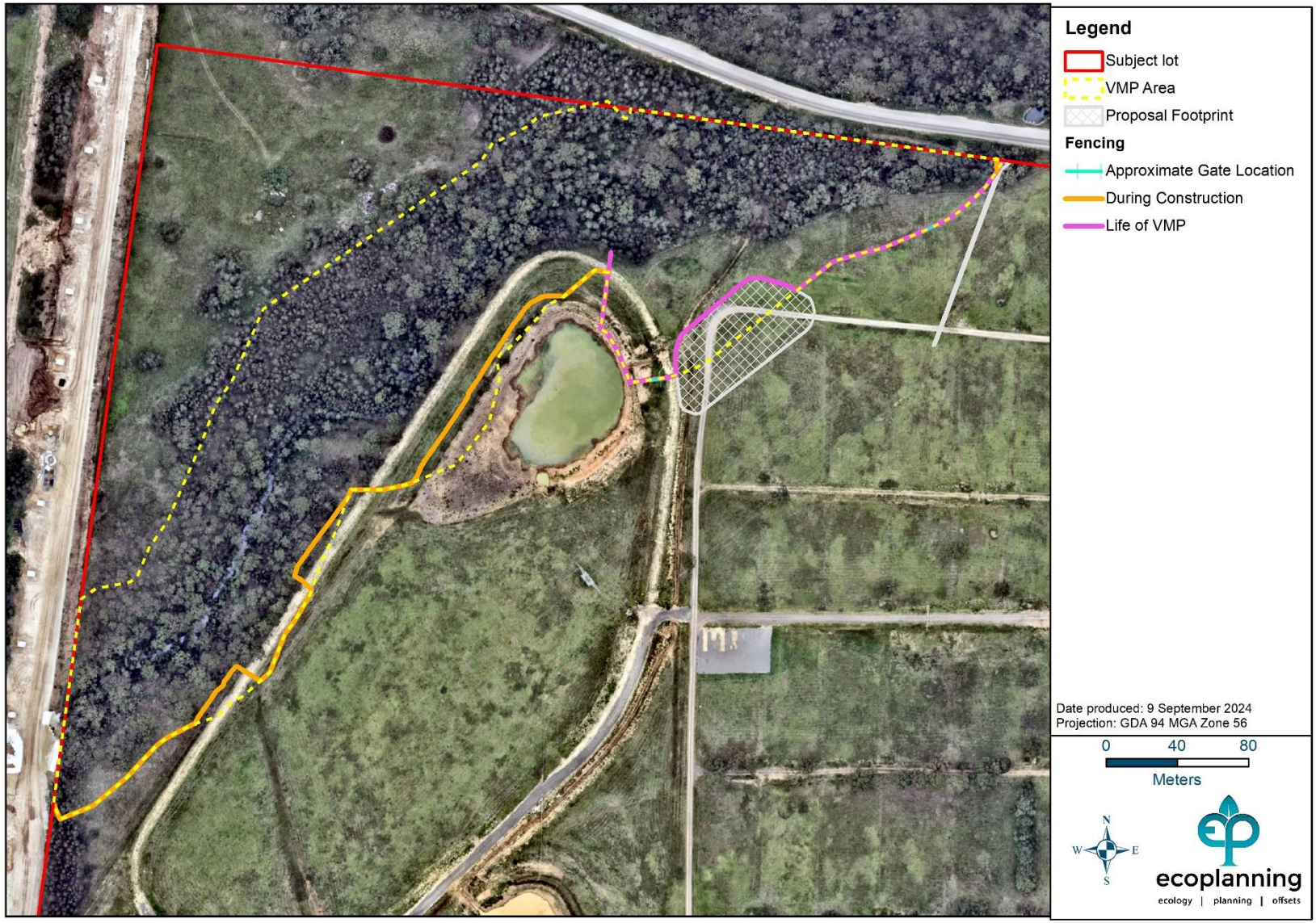

Figure 4.1: Fencing and new gates.

4.1.4 Signage

Signage will be positioned along the boundary of the VMP area and should state that the area is being managed for conservation purposes. The exact information and location of these signs will be determined during implementation of the works in accordance with the VMP.

4.1.5 Construction site establishment

Although this VMP primarily deals with management of vegetation within the VMP area, contractors undertaking clearing and construction works within the subject lot must observe the following protocols to ensure the integrity of surrounding native vegetation patches.

Unless explicitly assigned to other parties, the responsibility for adhering to the protocols outlined below lies with the contractor carrying out the works described. The following procedures are to be undertaken prior to clearing, construction, and other development works:

- Project boundaries including vegetation clearing limits and the VMP area are to be clearly identified on all site plans used by personnel conducting development works on site.
- Contractors are to be made aware of clearing limits and how they are marked.
- Contractors are to be informed that they are not to encroach on areas beyond the clearing limits. Such encroachment includes but is not limited to:
    - Vehicle movements
    - Vehicle parking
    - Storage of materials and machinery
    - Stockpiling of soil, vegetation, or timber
    - Sediment control and run-off.
- All plant and machinery must be cleaned of any foreign soil and seed prior to being transported to the site to prevent the spread of weeds. All vehicles and machinery must be inspected prior to site entry and those failing inspection are to be sent away for cleaning. Appropriate records of inspections must be maintained.
- Prior to commencement of clearing, vegetation scheduled for removal will be clearly delineated by the contractor and clearing boundaries should be pegged out by a surveyor. Flicker tape/bunting or similar to be installed at boundaries of the VMP area.

4.2 Weed management within the VMP area

Primary, secondary and maintenance weed control works are required to restore and enhance the environmental values of the VMP area. The aims of primary weed control will be to eradicate woody weeds and priority weeds; and reduce herbaceous weed and exotic grass cover to provide space for natural regeneration and revegetation. Secondary weed control will focus on follow-up treatment of weeds targeted during primary weed control. The aim of maintenance works will be to prevent the re-establishment of woody weeds and priority weeds, further reduce herbaceous weed and exotic grass cover, while also controlling weeds emerging in revegetation areas and around native ground covers.

Weed removal techniques should be appropriate to the weed type, growth form, ecology, and existing conditions of the site (Buchanan 2000; Bradley 2002). Wherever possible, weed removal should be carried out prior to annual seed set. Herbicide application, such as backpack spraying, should be avoided where loss of native species is likely to occur and the application of herbicide needs to be considered for its suitability around waterways / water.

Herbicide spraying should be conducted in accordance with the product label and associated Safety Data Sheet.

Weed control works are to be undertaken broadly as detailed in this VMP, however, the bushland regeneration contractor will ultimately be responsible for determining the timing and frequency of weed control works in response to site conditions. The most appropriate weed control techniques to achieve the performance targets outlined below are to be determined by the bushland regeneration contractor, but are likely to include hand removal, mechanical removal, herbicide application and slashing. Disturbance of the soil during the weed management process should be minimised at all times (see Buchanan 2000, Bradley 2002).

See **Appendix A** for a guide to best practice weed control techniques.

4.2.1 Primary weed control

Primary weed control is the initial removal of weed species. Primary weed control will focus on eradicating all woody weeds and priority weeds; and reducing exotic grass and herbaceous weed cover.

Woody weed control during this stage should target *Cinnamomum camphora** (Camphor Laurel), *Ligustrum lucidum** (Large-leaved Privet), *Ligustrum sinense** (Small-leaved Privet), *Lycium ferocissimum** (African Boxthorn) and *Cestrum parqui** (Green Cestrum). The cut and paint or drill and fill method should be used to treat woody weeds.

Herbicide spray application during this stage should target *Araujia sericifera** (Moth Vine), *Bidens pilosa**, *Asparagus asparagoides** (Bridal Creeper), *Cirsium vulgare** (Spear Thistle), *Eragrostis curvula** (African Lovegrass), *Cyperus eragrostis**, *Rubus fruticosus* spp. agg.* (Blackberry), *Senecio madagascariensis** (Fireweed) and *Tradescantia fluminensis** (Trad) . Hand removal is the recommended treatment method for these species in areas containing native ground cover.

In VMZ2 high-vol herbicide spray should take place targeting exotic grasses then mulching to prepare for planting.

Primary weed control will occur in Year 1.

4.2.2 Secondary weed control

Secondary weed control involves follow-up weed control to remove seedlings that have emerged after primary control and treatment of any existing weeds that reshoot. Any new priority weed infestations identified must be treated. Herbaceous weeds and exotic grasses around native ground covers must be treated during secondary control.

Secondary weed control will occur in Year 2.

4.2.3 Maintenance

The long-term management of a site aims to prevent weeds from becoming re-established after primary and secondary work. The focus of maintenance weed control will be to maintain priority weed and WoNS cover at low levels in the VMP area and support the growth of regenerating and planted native vegetation. Weeds emerging in close proximity to planted

native vegetation must be treated. New weed infestations may emerge around riparian areas, roads and the VMP areas boundaries; therefore, these areas should be regularly monitored during maintenance works to prevent new weed infestations.

Maintenance weed control will occur in Year 3-5.

4.2.4 Weed disposal

All weed material, seeding herbaceous/grass material, fruit and tubers which are removed mechanically or by hand, should be bagged, removed from the VMP area, and disposed of at an appropriate green waste facility. *Rubus fruticosus* spp. agg* can propagate vegetatively; therefore, all material from plants of these species which has been removed must be disposed of at an appropriate green waste facility.

4.3 Revegetation

The revegetation program will use a combination of active planting, assisted natural regeneration, weed management and monitoring to meet the overall objective of the restoring native vegetation in the VMP area.

In VMZ 1, natural regeneration will be prioritised, if regeneration of native species in all strata is not observed in cleared areas after year 2 supplementary planting will used to restore the native PCT.

As VMZ2 is cleared, supplementary planting is required to restore PCT 4025. Planting species and densities are listed in **Table 3-1**

4.3.1 Revegetation measures

Measures will include:

- Weed management: Weeds in the VMP area will be treated during primary and secondary weed control works prior to the commencement of the revegetation works in each VMZ. Maintenance weed control works will treat weeds emerging in revegetated areas.
- Revegetation plantings to improve vegetation integrity and re-establish plant communities: The objective of revegetation is to re-establish native vegetation representative of PCT 4025 in the VMP area across all strata.
- Jute matt squares: Jute matt squares will suppress weed growth and increase moisture retention around planted trees and shrubs.
- Tree guards: Tree guards will protect planted trees and shrubs from herbicide spray drift, foraging animals and wind damage.
- Monitoring: Vegetation condition within the VMP area will be monitored to ensure that there is no, or minimal, loss of vegetation integrity due to indirect effects from construction activities. Plantings will be monitored to track their success and support an adaptive management program. If vegetation condition is negatively affected within the VMP area by external impacts, or plantings are not successful, the bushland regeneration contractor or project ecologist will recommend appropriate adaptive management measures (such as additional weed control activities, exclusion fencing or compensatory plantings).

4.3.2 Revegetation protocols

A planting palate for each VMZ is provided in Section 3.4, composed of species from PCT 4025. Tubestock must be local provenance stock sourced from a local recognised nursery. Tubestock will be planted at densities listed in Section 3.4, or alternatively, in such numbers and densities as will, in the judgement of the project ecologist or bushland regenerator contractor, provide the best prospect of re-establishing PCT 4025. Planting densities have accounted for existing native vegetation in each stratum. Revegetation works are to be carried out as follows:

- The proponent is to engage a suitably qualified and experienced bushland regeneration contractor to undertake revegetation within the VMP area, in accordance with the VMP and with guidance from the project ecologist.
- Revegetation works are to commence following secondary weed control.
- Areas of exotic grassland in VMZ2 are to undergo canopy, shrub and understory planting.
    - 50-100 cm^2 buffer zones will be prepared for each planting in the exotic grassland. Buffer zones will be prepared via foliar spot spraying.
    - Herbicide spraying of native vegetation during this process must be avoided.
    - Any treated weeds still standing in buffer zones are to be slashed, using a brush cutter, to prepare the area for planting.
- Each upper and middle stratum species is to be planted into a jute matt square and protected with a tree guard pinned down with a hardwood stake. Each jute matt square should be pinned down by 4 pins. Tubestock will be planted into pre-made slits in the jute matt squares.
- Planting of tubestock is favoured over broad scale seed application, such as direct seeding or brush matting.
- A water-retaining and fertilising product (e.g. Terraform™) should be applied to each tubestock hole, to assist in the establishment of the plants.
- The bushland regeneration contractor shall be responsible for irrigation of plantings until plants become established. Irrigation is to occur on an “as required” basis in response to climatic conditions (i.e. frequent watering if planting has occurred in summer; less frequent watering may be required if planting has occurred in winter).

Concurrent with ongoing weed monitoring, the bushland regeneration contractor is to monitor the condition of revegetation plantings to detect survival rate.

4.4 Relocation of salvaged hollows and habitat supplementation

Salvaged hollows if encountered during clearing works of the associated development may be relocated into VMZ 1. They are to be placed under the supervision of a qualified ecologist and only if the placement will not damage the existing native vegetation in any way

5 Implementation

5.1 Treatment schedule

The implementation of the management actions are summarised with responsibilities, key performance indicators and timing in **Table 5-1** below.

Table 5-1: Timing of management actions.

Action	Responsibility	KPI	Timing
All site areas			
VMP area shown on all site plans	The proponent / site manager / contractors	The VMP area is clearly marked on all site plans and documents used by the contractors on site.	Prior to commencement of any works on site
Contractor inductions	Site manager	All personnel on site are aware of relevant sections of this VMP, including clearing limits, equipment hygiene, and activities prohibited in VMP.	Prior to commencement of any works on site
VMP area (general)			
Fencing	Bushland regeneration contractor	VMP area perimeter fenced for the life of the development.	Prior to development works
Signage	Bushland regeneration contractor	Informational signage in place for the life of the development.	Prior to development works
Ongoing weed monitoring	Bushland regeneration contractor	Photo monitoring taken at established photo points using star pickets. Weed cover exceeding KPIs is recorded.	Years 1-5
Certification	Council / Project ecologist	Woody weeds eradicated in VMP area. Priority weeds and WoNS reduced to <1% cover in the VMP area. Herbaceous weed and exotic grass cover reduced to <5% cover.	End of Year 5
VMZ 1			
Primary weed control works	Bushland regeneration contractor	Woody weeds eradicated in VMP area. Priority weeds and WoNS reduced to <1% cover in the VMP area. Herbaceous weed and exotic grass cover reduced to <20% cover.	Year 1
Secondary weed control works	Bushland regeneration contractor	Woody weeds eradicated in VMP area. Priority weeds and WoNS maintained at <1% cover in the VMP area. Herbaceous	Year 2

Action	Responsibility	KPI	Timing
		weed and exotic grass cover reduced to <10% cover.	
Maintenance weed control works	Bushland regeneration contractor	Woody weeds eradicated in VMP area. Priority weeds and WoNS reduced to <1% cover in the VMP area. Herbaceous weed and exotic grass cover reduced to <5% cover.	Years 3-5
VMZ 2			
Primary weed control works	Bushland regeneration contractor	Woody weeds eradicated in VMP area. Priority weeds and WoNS reduced to <1% cover in the VMP area. Herbaceous weed and exotic grass cover reduced to <30% cover.	Year 1
Secondary weed control works	Bushland regeneration contractor	Woody weeds eradicated in VMP area. Priority weeds and WoNS maintained at <1% cover in the VMP area. Herbaceous weed and exotic grass cover reduced to <20% cover.	Year 2
Revegetation	Bushland regeneration contractor	Planting species and densities as specified in the VMZ planting list table if required after year 2. Each upper and middle stratum species is installed with a jute matt square, tree guard and hardwood stake.	End of Year 2 if required
Irrigation of plantings	Bushland regeneration contractor	>90% of tubestock survive if planting is required after year 2. If survival rates fall below 80%, undertake compensatory planting as outlined above.	Ongoing after revegetation planting until all plants have become established.
Maintenance weed control works	Bushland regeneration contractor	Woody weeds eradicated in VMP area. Priority weeds and WoNS reduced to <1% cover in the VMP area. Herbaceous weed and exotic grass cover reduced to <5% cover.	Years 3-5
Development area			
Equipment hygiene	Contractors	All machinery or other equipment on site is to be cleaned of foreign soil and seed prior to arrival on site.	During development works
After life of VMP monitoring			

Action	Responsibility	KPI	Timing
Ongoing monitoring for biosecurity duties	The proponent / project ecologist	An Ecologist is to visit the site to monitor weeds within the VMP area and provide advice on any action required to fulfill biosecurity duties under the *NSW Biosecurity Act 2015* and the Greater Sydney Regional Strategic Weed Management Plan. A brief report is to be prepare to council detailing the outcome of the site visit and any management measures applied.	Every 3 years from the end of year 5 during operation.

5.2 Cost of implementation

The costing for the VMP has been calculated over a five-year period and is estimated at a total of **$200,600** (**Table 5-2**). This includes the cost of the implementation of the VMP and associated reporting. This figure includes a Year 1 cost of **$35,750**, a cost of **$73,350** in Year 2 and a cost of **$91,500** in Year 3-5. Reporting costs have been estimated at a total of $2,500, which is incorporated into the costing for each year.

The costs have been calculated based on the employment of trained bush regenerators at a rate of $625 pp/day ($60 pp/hr for an 8-hour working day), which covers crew and supervisor wages, equipment, herbicides, and all other associated business costs. In addition, an indicative cost is provided for the monitoring report which is to be produced after each stage of the VMP.

The costing indicates how many crew members are required for each task, based on the size of the site, extent of weed infestation and expected timeframes for the completion of primary works, secondary works, revegetation and maintenance works. The costs are indicative of commercial bush regeneration rates, and some variation is excepted depending on the bush regeneration company used and their associated charge out rates.

Table 5-2: Cost of implementation.

Timing	Task	Cost
Prior to development works	Fencing based on the cost of materials ($5/m) and employing a team of two bush regenerators at $625 ($60 per hour for 8 hours) pp/day to install the fencing.	$750
Year 1	Primary weed control based on a cost of employing a team of four bush regenerators at $625 ($60 per hour for 8 hours) pp/day to attend the site one day every month.	$30,000
End of Year 1	Cost of 12-monthly report. The report should consist of a one to two-page report detailing the works conducted on site ($500 per report).	$500
Year 1 total		**$35,750**

Timing	Task	Cost
Year 2	Secondary weed control based on a cost of employing a team of four bush regenerators at $625 ($60 per hour for 8 hours) pp/day to attend the site one day every month.	$30,000
Year 2	VMZ2 revegetation planting 8,402 @ $5 per plant (cost of tubestock, labour, irrigation, and maintenance).	$42,010
Year 2	VMZ2 jute squares, tree guards and hardwood stakes (336 @ $2.50 per set)	$840
Year 2	Cost of 12-monthly report. Report should consist of a one to two-page report detailing the works conducted on site ($500 per report).	$500
Year 2 total		**$73,350**
Year 3-5	Maintenance weed control based on a cost of employing a team of four bush regenerators at $625 ($60 per hour for 8 hours) pp/day to attend the site one day every month.	$90,000
Year 3-5	Cost of 12-monthly report. Report should consist of a one to two-page report detailing the works conducted on site ($500 per report).	$1,500
Year 3-5 total		**$91,500**
Cost of VMP implementation over 5-year period		**$200,600**

Note: These prices are estimates based on industry standards. Bushland regeneration contractor quote will determine final costing.

A fee (as per Council's fees and charges) may apply per inspection and re-inspections. This fee does not include inspections and reporting every 3 years for ongoing monitoring of biosecurity duties after the life of this VMP.

5.3 Concurrent works

Vegetation management works will be carried out concurrently with development works in the subject lot, therefore, development works should not interfere with management works in the VMP area.

6 Bushland regeneration contractor, reporting and certification

6.1 Bushland regeneration contractor

Suitably qualified and experienced bushland regeneration contractors who are members of the Australian Association of Bush Regenerators or who fulfil the membership criteria must undertake all vegetation management works. In addition to this, team leaders should hold a Certificate III in Conservation & Land Management or possess equivalent field experience and certification. The contractor should carry out best practice bush regeneration techniques as described by Buchanan (2000) and Bradley (2002).

A flexible approach to this site is recommended which is consistent with adaptive management principles. It allows the contractor to develop and build on site knowledge whilst implementing this VMP to achieve the required performance criteria.

6.2 Monitoring

The bushland regeneration contractor will monitor the vegetation for changes over time. The objective of the monitoring and reporting program is to record changes to the vegetation resulting from the vegetation management works. Monitoring works will require liaison with the land manager and the bushland regeneration contractor.

Monitoring will include fixed photo points marked on ground using star pickets. Photos and associated notes and observations are to be taken annually to demonstrate natural regeneration, weed coverages, fence condition and tubestock planting.

6.3 Reporting

A report will be provided to Council regarding the progress and milestones of the VMP on a yearly basis (see **Appendix A**). Reports are to include:

- Works carried out, including weed species targeted and their location
- An approximation of the time spent on each task
- Any observations, such as the occurrence of new weed species
- Rates of regeneration of native species
- A description of any problems encountered and how they were overcome
- A summary of how the site-specific objectives have been met (or not)
- Herbicide and other chemicals used, including quantity, dilution rate and other relevant information
- Weed control mechanisms used during the period
- Climatic conditions which may have influenced weed germination and growth
- Performance criteria and success
- If required, maps of weed distribution and density

Following issue of the Subdivision Certificate, progress reports are required every 12 months over a period of five years.

For the ongoing monitoring for biosecurity duties after the life of this VMP, an Ecologist is to visit the site to monitor weeds within the VMP area and provide advice on any action required to fulfill biosecurity duties under the NSW Biosecurity Act 2015 and the Greater Sydney Regional Strategic Weed Management Plan. Every 3 years from the end of year 5 during operation, a brief report is to be prepare to council detailing the outcome of the site visit and any management measures applied.

6.4 Certification

Completion criteria for this VMP requires the VMP area be maintained as follows from the end of year 5, for the life of the development:

- Woody weeds eradicated from the VMP area.
- Priority weeds and WoNS reduced to <1% in the VMP area.
- Herbaceous weed and exotic grass cover reduced to <5% cover in the VMP area

The bushland regeneration contractor will issue a report to Council detailing compliance with these completion criteria within the annual report for year 5. The report will include photographs and a description of the vegetation present within each management zone in the VMP area and any other relevant matters (e.g. success or failure of revegetation in specific areas). The certification report will include a review of the VMP and recommendation of corrective actions or additional management actions to retain and enhance the environmental values for the life of the development.

7 References

Bradley, J. (2002) *Bringing back the bush*. The Bradley Method of Bush Regeneration. New Holland Publishers, Sydney.

Buchanan R.A (2000) *Bush regeneration: recovering Australian landscapes*. 2nd edn, TAFE NSW, Sydney.

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NSW Department of Planning, Industry and Environment (DPIE) (2024) Cumberland Plain Conservation Plan.

Ecoplanning (2023a). Flora Fauna Assessment– Alspec Industrial Park, Luddenham Road, Orchard Hills NSW. Prepared for HBB Property.'

Ecoplanning (2023b). Ecological Constraints Assessment– Alspec Industrial Park, Luddenham Road, Orchard Hills NSW. Prepared for HBB Property.'

Ecoplanning (2024). Biodiversity Management Plan– Alspec Industrial Park, Luddenham Road, Orchard Hills NSW. Prepared for HBB Property.'

NSW Department of Planning and Environment (DPE) (2022a) Controlled activities – Guidelines for vegetation management plans on waterfront land

NSW Department of Planning and Environment (DPE) (2022b). Controlled activities – Guidelines for vegetation management plans on waterfront land. Accessed at: https://www.dpie.nsw.gov.au/__data/assets/pdf_file/0005/386204/licensing_approvals_controlled_activities_instream_works.pdf

NSW Department of Planning, Industry and Environment (DPIE) (2022) The Cumberland Plain Conservation Plan

Landcom (2004) Managing Urban Stormwater: Soils and construction - Volume 1 4th edition

Penrith City Council (2023) Pre-lodgement Advice for Proposed Development: Bulk Earthworks and Subdivision into Nine Lots, Including Vegetation Removal, New Roads, and Basins (PL23/0072). Dated 15 December 2023.

Appendix A Acceptable weed removal techniques

Note this list is not exhaustive. It is intended to provide a guide to assist in VMP implementation. Note that given the nature of the site and the position in proximity to a drainage area, mechanical and hand removal techniques are preferred, wherever possible.

General

- The contractor shall take all care not to poison existing desirable vegetation when undertaking herbicide control methods.
- The correct herbicide shall be selected and used appropriately in accordance with instruction on the label and to ensure effective results on all priority weeds.
- Herbicide control is not to be used within or near water courses. The contractor shall obtain all required permits prior to use of herbicides near any water course and submit details of proposed spraying and chemicals to be used for approval prior to commencement.
- All herbicide spraying is to be undertaken using apparats deemed as appropriate, generally this will be backpack or vehicle mounted spray boom in large areas. All other methods of herbicide application are not to be used onsite unless discussed and approved in writing by the Project Ecologist.
- The contractor shall ensure any spray drift is kept to an absolute minimum.

Herbicide spraying

- Herbicides should not be applied prior to rain occurring. This reduces the herbicides effectiveness as well as being transported in runoff to creek lines and waterways.
- The use of herbicides should be considered when:
  - There are small areas of dense priority weeds with few or no native plants to protect.
  - There are large areas of priority weeds.
  - The priority weeds are growing too rapidly for physical removal; and
- The spraying of weeds must only be undertaken by experienced persons with ChemCert (AQF-3) or equivalent qualifications. The success of each treatment must be evaluated by the operator after a set period of time and re-applied (if necessary) according to the labelled effectiveness for each herbicide. Care must be taken when applying herbicides near drainage lines to avoid excess use due to the sensitivity of the water bodies into which runoff will eventually flow.

Mechanical removal

- Mechanised removal using plant in a manner that does not impact adjacent native vegetation.
- Once initial treatment has occurred follow up cut and paint will be required to ensure any remaining plants are treated. Should any plants be found that are small enough to pull out successfully by hand this is preferred. Ensure that all roots are removed. Hand pulling techniques are outlined below.

- Hand removal will likely be required after initial treatment and will be used in the event of new seedling emergence which will have recolonised after initial removal. Hand removal shall be employed ensuring that all roots are removed as described below.

Hand removal

- Best undertaken when the soil profile is moist to ensure full and ease of removal and disposal off site.
- Apparent seeds and fruit are to be removed and placed in a bag for removal and disposal off site.
- Firmly take hold of the seedling at ground level, pull, and manipulate backwards and forwards until it releases cleanly. If the plant is held too high, it may break resulting in root material left behind in the soil. Remaining plant material may re-establish in this instance.
- All roots remaining within the soil shall be removed.
- Should the seedling have a spreading root system, roots will require individual removal.
- All seedlings and hand pulled weeds are to be placed in a bag, removed from site and disposed of sensibly.

Woody weed removal techniques

- Cut and paint woody weeds to 10 cm basal diameters.
- Stem injection.
- Frilling or chipping - Plants should be actively growing and in good health.
- Deciduous plants should be treated in spring and autumn when leaves are fully formed.
- For multi-stemmed plants, inject or chip below the lowest branch to treat each steam individually.
- Herbicides must be injected immediately before plant cells close (within 30 seconds) and translocation of herbicide ceases

Appendix B Reporting template

Date			
Name of contractor:			
Hours worked on site since last monitoring report:			
Site condition:	Zone		
	Weed cover %		
	Seedling survival %		
	Planting numbers		
	Herbicide used (in Litres)		
	Other		
Describe relevant weed management techniques:			
Describe problems; e.g. Weed invasions, damage to planted material, etc.:			
Photographic evidence:			
Planned work before next monitoring report:			

Appendix C Correspondence with DPI

Erin Leslie

From: Erin Leslie
Sent: Friday, 26 July 2024 4:03 PM
To: Erin Leslie
Subject: FW: Enquiry Regarding Integrated Development Requirements and KFH Stormwater Pipe Installation

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From: Jess Hyland <jess.hyland@dpi.nsw.gov.au>
Sent: Friday, July 5, 2024 2:21 PM
To: Erin Leslie <Erin.Leslie@ecoplanning.com.au>
Subject: RE: Enquiry Regarding Integrated Development Requirements and KFH Stormwater Pipe Installation

Thanks Erin,

I've just had a look in our system and the mapping looks correct to me, from the description you provided in your last email it seems more likely that you would trigger integrated development with DCCEEW Water and most likely require a Controlled Activities Approval (CAA) from them. Usually in these cases Council will refer the DA to both Water and Fisheries via the planning portal and if Water determine that a CAA is not required then Fisheries will require a Part 7 Permit for dredging/reclamation. Most applications that involve work in the waterway or its banks will include an aquatic ecology assessment with the DA, so your last sentence sounds right to me.

I hope that helps!

Jess

Jess Hyland *(she/her)*
Fisheries Manager
Coastal Systems | Fisheries
Department of Primary Industries
and Regional Development

M 0455 794 560 **E** jess.hyland@dpi.nsw.gov.au

dpird.nsw.gov.au

Dharawal Country
84 Crown Street
Wollongong NSW 2500

Department of Primary Industries
and Regional Development

We stand on Country that always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

From: Erin Leslie <Erin.Leslie@ecoplanning.com.au>
Sent: Friday, 5 July 2024 1:56 PM
To: Jess Hyland <jess.hyland@dpi.nsw.gov.au>
Subject: RE: Enquiry Regarding Integrated Development Requirements and KFH Stormwater Pipe Installation

Of course! It's 1/-/DP1293805.

Erin Leslie
Consultant Ecologist
BE (Hons)
M: 0435 254 384
E: erin.leslie@ecoplanning.com.au

ecoplanning
ecology | planning | offsets

From: Jess Hyland <jess.hyland@dpi.nsw.gov.au>
Sent: Friday, July 5, 2024 1:47 PM

To: Erin Leslie <Erin.Leslie@ecoplanning.com.au>
Subject: RE: Enquiry Regarding Integrated Development Requirements and KFH Stormwater Pipe Installation

Thanks Erin,

Can you give me a Lot/DP and I'll double check the mapping for you.

Jess Hyland *(she/her)*
Fisheries Manager
Coastal Systems | Fisheries
Department of Primary Industries
and Regional Development

M 0455 794 560 **E** jess.hyland@dpi.nsw.gov.au

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From: Erin Leslie <Erin.Leslie@ecoplanning.com.au>
Sent: Friday, 5 July 2024 1:44 PM
To: Jess Hyland <jess.hyland@dpi.nsw.gov.au>
Subject: RE: Enquiry Regarding Integrated Development Requirements and KFH Stormwater Pipe Installation

Hi and thanks Jess,

Sorry I missed your call – I was out in the field.

The client has also asked if you could confirm the KFH mapping is correct – it seems they had a similar job recently where DPI confirmed that the mapping had not been accurate and that Integrated Development was not needed.

The works have been described below:
"The stormwater pipe, head wall and scour protection would be installed adjacent to the creek, not within the creek itself" and they "intend to install the pipe as close as possible to the existing pipework that runs under Patons Lane, so the stormwater flows directly into these pipes". They "don't intend to block the creek at any stage" however "would need to open a small part of the bank for the stormwater to flow into the creek and existing pipework".

Based on the above, would this be considered work in the bank of the creek?

If confirmed KFH and work in the bank of the creek, I imagine we would defer to an aquatic ecologist and submit their findings with the DA at which time it would be referred to DPI by council – does that all sound right?

Erin Leslie
Consultant Ecologist
BE (Hons)
M: 0435 254 384
E: erin.leslie@ecoplanning.com.au

From: Jess Hyland <jess.hyland@dpi.nsw.gov.au>
Sent: Friday, July 5, 2024 12:05 PM
To: Erin Leslie <Erin.Leslie@ecoplanning.com.au>
Cc: Robert Humphries <Robert.Humphries@ecoplanning.com.au>
Subject: RE: Enquiry Regarding Integrated Development Requirements and KFH Stormwater Pipe Installation

Hi Erin,

Thanks for your email, I just tried to give you a call to discuss but have left a message. If the works are within key fish habitat and will be disturbing the bank of the creek, then the FM Act will most likely be triggered. Usually, integrated development applications are referred to Fisheries by the relevant council once they are uploaded to the NSW Planning Portal.

Give me a call if you'd like to discuss further.

Thanks,

Jess

Jess Hyland *(she/her)*
Fisheries Manager
Coastal Systems | Fisheries
Department of Primary Industries
and Regional Development

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From: DPI AHP Central Mailbox <ahp.central@dpi.nsw.gov.au>
Sent: Thursday, 4 July 2024 8:23 AM
To: Jess Hyland <jess.hyland@dpi.nsw.gov.au>
Subject: FW: Enquiry Regarding Integrated Development Requirements and KFH Stormwater Pipe Installation

Hi Jess,

I think Patons Lane relates to the Resource Recovery Centre in Western Sydney so this might be your area.

If so, would you like this as a consult file or just respond direct to the email?

Thank you
Jane

Jane Gordois
Administrative Assistant
Primary Industries
Department of Primary Industries
and Regional Development

P 0429 135 230 **E** jane.gordois@dpi.nsw.gov.au

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Coffs Harbour Jetty

Department of Primary Industries
and Regional Development

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From: Erin Leslie <Erin.Leslie@ecoplanning.com.au>
Sent: Wednesday, 3 July 2024 12:57 PM
To: DPI AHP Central Mailbox <ahp.central@dpi.nsw.gov.au>
Cc: 2024-027 - AIBP <926d659c.ecoplanning.com.au@apac.teams.ms>; Robert Humphries <Robert.Humphries@ecoplanning.com.au>
Subject: Enquiry Regarding Integrated Development Requirements and KFH Stormwater Pipe Installation

Dear DPI Team,

I am writing on behalf of our client, HBB Property Development regarding a query related to their upcoming project.

They are in the process of planning the installation of a stormwater pipe, head wall, and scour protection adjacent to a creek near Patons Lane, which I believe is mapped as KFH. Their intention is to connect this new infrastructure to existing pipework without disrupting the creek bed itself.

Our client is seeking clarification on whether this project qualifies as Integrated Development under the Fisheries Management Act. We have reviewed the DPI Integrated Development Guidelines and understand the importance of confirming whether our project requires formal referral and assessment by DPI.

Could you please advise us on the appropriate steps to take? Alternatively, do you require any additional information from us to facilitate this process?

Your guidance on this matter would be greatly appreciated. Please feel free to contact me via my details below.

Thank you for your assistance. I look forward to your prompt response.

Best regards,

Erin Leslie
Consultant Ecologist
BE (Hons)
M: 0435 254 384
E: erin.leslie@ecoplanning.com.au