

# Walkerville Foreshore Reserve Vegetation Management Plan 2024

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Karen Jolly and Dylan Osler

Prepared for Walkerville Foreshore Committee of Management

## **Ecological Perspective**

PO Box 1250 Kangaroo Ground VIC 3097

[dylan@ecologicalperspective.com](mailto:dylan@ecologicalperspective.com)

TEL: 0410 442 191

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### *Authors:*

Dylan Osler

#### **Ecological Perspective**

PO Box 1250 Kangaroo Ground VIC 3097

[dylan@ecologicalperspective.com](mailto:dylan@ecologicalperspective.com)

Karen Jolly

#### **Holocene Environmental Science**

PO Box 843 Berwick VIC 3806

[karen@holocene.com.au](mailto:karen@holocene.com.au)



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*Front cover photographs: (inset) Coastal Headland Scrub (EVC 161); and side panel (from top to bottom): Coastal Headland Scrub (EVC 161), rock walling along the foreshore; Warm Temperate Rainforest (EVC 32), Coastal Headland Scrub (EVC 161) at Bird Rock, Warm Temperate Rainforest (EVC 32) at Second Creek, and the FFG Act 1988 listed *Wurmbea uniflora* (One-flower Early Nancy). All photographs, Walkerville Foreshore Reserve, October - December 2023.*



## EXECUTIVE SUMMARY

### Introduction and Site Context

Ecological Perspective was engaged by the Walkerville Foreshore Committee of Management (henceforth, referred to as the Committee) to prepare a *Vegetation Management Plan* for the Walkerville Foreshore Reserve in South Gippsland. The flora and fauna and landscape and amenity values of the site have previously been documented by DEPI (2014) and Tract Consultants (2018). The purpose of the current study was to determine the currency of known vegetation values and threats at the site, and in accordance with these findings, to prepare new management recommendations that seek to enhance and sustain these values, as well as visitor amenity. The resulting plan includes: a description of the site; a synopsis of flora (and fauna values) supported by the site; a description of threatening processes as they pertain to the described values; a management vision and objectives for the subject area; a précis of management strategies; and a set of proposed management actions that were designed to achieve the stated objectives. The term of the plan is five years, with consideration given to an *ongoing maintenance period* of a further five years.

Walkerville Foreshore Reserve is approximately 41.3 hectares in size and falls within the management jurisdiction of the Committee. The reserve (principally) forms part of a large continuous block that includes neighbouring Cape Liptrap Coastal Park. It is subject to high visitation and recreational use, with key assets including the Walkerville Camping Reserve. Visitor amenities also variously include walking trails, boat ramps, picnic facilities, carparks and toilets.

Surveys to inform preparation of the current plan were undertaken from October to December 2023. Notably, for practical purposes, the Foreshore Reserve was divided into three discrete management units in accordance with stipulations by the Committee; namely, the Northern Unit, Central Unit and Southern Unit. Reference is made to these units throughout the discussion of values and threats in the plan, and as pertains to ongoing management.

### Flora Values

The Walkerville Foreshore Reserve supports a diverse range of vegetation types that occur across a relatively small and narrow area. The underlying geology of the Walkerville and Waratah Bay area, and also larger Cape Liptrap Coastal Park, coupled with the varied geomorphology and hydrology, and localised climatic conditions (e.g. orographic), have led to the area sustaining a diverse and uncommon assemblage of vegetation communities. The wide array of sheltered environs / habitats has also contributed to the richness of flora both within the reserve and immediate surrounds. Overall, while vegetation within the reserve is of varying condition due to historic and extant land management practices, it principally comprises of floristically and structurally intact flora of varying age classes, and includes examples of several communities that are poorly represented regionally, or have a naturally restricted range (e.g. Riparian Fern Scrub).

Of note, overall, the most intact areas in an ecological / environmental context occurred proximate to Cape Liptrap Coastal Park, where the larger and more extensive patches of remnant vegetation provide a buffer from the *edge effect* and from disturbances associated with neighbouring private properties (e.g. weed incursion and rubbish dumping). Vegetation was comparably more fragmented where it interfaced private properties, and also neighbouring (and within) the Camping Reserve. Here, vegetation has been subject to greater disturbance (including more frequent pedestrian and vehicular access and egress) and has therefore been more prone to weed invasion. In some sections, such as along Bayside Drive, other influences such as coastal erosion and the proximity of the roadside (and associated disturbances) have had a greater impact on the condition of the (now) narrow band of coastal vegetation.

During the site visits completed from October to December 2023, the Foreshore Reserve was found to support eleven Ecological Vegetation Classes (EVCs); namely, Coast Banksia Woodland (EVC 2), Coastal Dune Scrub (EVC 160), Coastal Headland Scrub (EVC 161), Damp Forest (EVC 29), Damp Heathy Woodland (EVC 793), Damp Melaleuca

Scrub (EVC 949), Lowland Forest (EVC 16), Riparian Fern Scrub (EVC A120), Riparian Thicket (EVC 59), Sand Heathland (EVC 6), and Warm Temperate Rainforest (syn. Littoral Rainforest) (EVC 32). It was also found to support a twelfth vegetation type, Tree Fern Gully, that was floristically distinct from the documented benchmarks for the bioregion.

A total of 337 vascular flora species were recorded within the boundary of the reserve during the targeted vegetation mapping exercise. Of the flora, 236 species (70 %) were indigenous taxa, and 101 (30 %) were exotic taxa or naturalised species that occur beyond their natural range. Overall, observations made during the site visits, revealed that the flora was highly diverse, and included a range of both terrestrial and riparian trees, small and medium shrubs, tree ferns, ground ferns, climbers, orchids, herbs and graminoids, as well as a smaller array of epiphytes. Notably, the rich assemblage of species that occur within the reserve is reflective of the range *ecological niches* and *microclimates* that the area affords. Saliiently, for a number of species, the study area represents the westerly extent of their *known range*; with examples of taxa in this category including the endangered *Flora and Fauna Guarantee Act 1988* (FFG Act 1988) listed *Hakea decurrens* subsp. *platytaenia* (Coast Needle-wood), and the regionally significant *Banksia serrata* (Saw Banksia).

In addition to *Hakea decurrens* subsp. *platytaenia* (Coast Needle-wood), the flora recorded during the October – December 2023 surveys included three other taxa that are listed on the FFG Act 1988; namely, the tree *Eucalyptus kitsoniana* (Bog Gum), the shrub *Monotoca glauca* (Currant-wood), and the herb *Wurmbea uniflora* (One-flower Early Nancy). Of the flora, *Monotoca glauca* (Currant-wood) was the most widespread, and was recorded in all three management units. Although not formally documented (i.e. referenced in the VBA), *Eucalyptus kitsoniana* (Bog Gum) and *Monotoca glauca* (Currant-wood) were known to occur at Walkerville Foreshore prior to the current study, with the other two taxa representing new records / findings.

Further to the listed flora recorded for the site, a number of regionally significant taxa were also observed during the October – December 2023 surveys. They included flora that are currently only known from a small number of locations within the South Gippsland region, and that have typically been observed to be in population decline. Of these, noteworthy species included *Banksia serrata* (Saw Banksia), *Carex gunniana* var. *gunniana* (Swamp Sedge), *Phyllangium divergens* (Wiry Mitre-wort), and *Xanthorrhoea australis* (Austral Grass-tree).

### Fauna Values

Observations made during the October – December 2023 field surveys also highlighted the significance of Walkerville Foreshore Reserve as faunal habitat, principally given that the site contains several distinct habitat types that range from forests to woodlands, to heathlands and scrub, to coastlines. The diversity of the available habitats, coupled with the maturity of several of the forest types, and the connectedness of the site to the surrounding landscape (e.g. Cape Liptrap Coastal Park), suggests the site has the capacity to support populations of a range of invertebrate, amphibious, fish, avian, reptilian and mammalian taxa. Notably, the significance of some of these species (as well as the site's capacity to support listed rare and threatened species) may aid in informing future management priorities at the reserve; specifically, with respect to prioritising vegetation management actions, and possibly as grounds for sourcing funding / grants. For example, a number of *Environment Protection and Biodiversity Act 1999* (EPBC Act 1999) and / or FFG Act 1988 listed fauna were observed during 2023, and it is probable that the presence of further taxa (such as Burrowing Crayfish (*Engaeus* spp.) and Swamp Skink (*Lissolepis conventryi*)) would be revealed should the site be subject to additional targeted survey.

### Threatening Processes

During the 2023 surveys, the core processes that threaten the ecological integrity of vegetation within the reserve were found to be: environmental weed incursion; invasive (and / or overabundant) indigenous shrubs and trees; habitat



fragmentation; and anthropogenic disturbances (for example, resulting from recreational activities (i.e. trampling of vegetation, and rubbish dumping). The potential for climate change to adversely impact biodiversity values was also noted. Other processes that threaten the ecological integrity of the Foreshore Reserve, as both flora and fauna habitat, were observed to include pest animal intrusion in the form of grazing, and predation by introduced fauna; namely, deer, foxes, rabbits, and also potentially cats. Several of these are listed as potentially threatening under the FFG Act 1988 (DELWP, 2022b) including: the reduction in biodiversity of native vegetation by deer, specifically Fallow Deer (*Dama dama*); predation of native wildlife by the Red Fox (*Vulpes Vulpes*); and predation of native wildlife by the Feral Cat (*Felis catus*).

During the site visits, 52 species were designated *priority environmental weeds* in the context of the Foreshore Reserve, and population data were collected to facilitate their active management. Thirty-three of the 52 *priority weeds* are nominated as *Very High* or *High Risk* in Victoria (White *et al.*, 2022). Four taxa, *\*Asparagus scandens* (Asparagus Fern), *\*Lycium ferocissimum* (African Box-thorn), *\*Rubus anglocandicans* (Common Blackberry) and *\*Salix X fragilis* (Crack Willow), are also deemed *Weeds of National Significance* (WONS) by Weeds Australia (2023), and together with three additional taxa (namely, *\*Allium triquetrum* (Angled Onion), *\*Cynara cardunculus* subsp. *flavescens* (Artichoke Thistle) and *\*Foeniculum vulgare* (Fennel)) are listed as *regional controlled* or *restricted weeds* within the West Gippsland Catchment under the *Catchment and Land Protection Act 1994 (Vic)* (CaLP Act 1994) (Agriculture Victoria, 2017). *\*Rubus anglocandicans* (Common Blackberry) is also present on the FFG Act 1988 '*Potentially Threatening Processes List*,' given its ability given its ability 'to invade native vegetation' (DELWP, 2022b).

The site inspections in 2023 indicated that the cover and distribution of priority weeds across the Foreshore Reserve was varied, and that priorities for control will also vary depending on the quality of vegetation they occur within, and the values each area supports. Overall, weed dispersal patterns were often found to reflect neighbouring land use. For example, those parts of the reserve that lay adjacent to house sites supported an array of 'garden escapees', while those closer to large core blocks of remnant vegetation were more likely to support more 'well-established' environmental weeds that are dispersed by animals. The inspections also revealed that several locally indigenous species had become 'overabundant' or invasive across parts of the Foreshore Reserve, where these taxa include *#Acacia longifolia* (Sallow Wattle) and *#Pittosporum undulatum* (Sweet Pittosporum); and, where the latter is listed as on the FFG Act 1988 '*Potentially Threatening Processes List*,' given its ability given its ability 'to invade native vegetation' (DELWP, 2022b).

### Management Vision, Strategies and Plan

The overarching vision for management of the Walkerville Foreshore Reserve, and thus of this plan, is to: retain, protect and enhance the ecological values and functioning of the site, and to appropriately manage threatening processes that may act to degrade these, while increasing landscape amenity and promoting active and passive recreation within discrete sections of the Foreshore Reserve.

Based on the findings of the field surveys, a series of objectives and management strategies were derived to address this vision. Notably, to facilitate the necessary *on-ground works*, each of the three management units was further divided into a series of discrete zones, and management recommendations were then tailored to the character of each zone. Zone delineation was based on vegetation and habitat type and condition, coupled with the range of threatening processes/management issues evident at the time of survey; consideration was also given to visitor amenity.

Strategic weed control will be fundamental to successful management for the benefit of flora and fauna populations supported by the Foreshore Reserve, and also to improve visitor amenity; as will the management of overabundant indigenous flora including *#Acacia longifolia* (Sallow Wattle) and *#Pittosporum undulatum* (Sweet Pittosporum). To facilitate the active management of weed infestations and overabundant flora across each management unit, a series of

actions has been proposed. For each of the priority weeds / overabundant flora that were recorded during the 2023 surveys, an overall *strategy* has been assigned to the unit (e.g. *eradicate*, *control* or *contain*), as well as appropriate *treatment methods*. Reference was also made to the *zone* / (s) where works should occur, the *sequencing of works* (i.e. whether they should be undertaken in Year 1 to Year 5 or a combination thereof), and the appropriate *frequency* (e.g. once per year or quarterly) and *timing* (e.g. spring / summer) of each action. Notably, the most efficacious strategies and treatment methods will differ across the management units (and the zones within), and in accordance with type and condition of surrounding vegetation.

Revegetation and species enrichment plantings will also have a role in *reinstating vegetation structure*, and *diversifying available habitat*. Notably, given that much of the Foreshore Reserve comprises of a high cover of indigenous vegetation that is principally intact, the need for intervention in the form of revegetation works is lessened. In these areas, facilitating the natural regeneration of indigenous flora through appropriate management (e.g. targeted weed control to limit competition, coupled with protection from trampling (pedestrian and vehicular)) is likely to be adequate, and will be a less expensive and more successful form of intervention over the longer-term. Revegetation and / or enrichment plantings are, however, recommended for a selection of the more degraded parts of the Foreshore Reserve, and in some parts, will be necessary to reinstate and diversify structural components of the flora. Here, one of the core objectives of such plantings would be to link patches of remnant vegetation, and thus create more contiguous habitat for resident flora and fauna. Notably, in Walkerville North, past efforts to revegetate sections of the reserve have resulted in some increases in vegetation cover, however, are likely to benefit from supplementary planting.

Saliently, revegetation works and species enrichment plantings are only likely to succeed if properly planned, protected from grazing, and subject to follow-up management such as weed control. Congruent with previous efforts, plantings along the foreshore should seek to link patches of remnant vegetation with other areas of remnant vegetation. Post-and-wire fencing should also continue to be used as a tool to delineate works area / recovering vegetation, and will likely be necessary to prevent encroachment from campers (e.g. trampling of establishing flora by pedestrians and vehicles). The fencing should be used in conjunction with tree guards, and will be fundamental to successful plant establishment in many areas, including with the Camping Reserve.

*Note: while other threatening processes (including coastal erosion and pest animal intrusion) are referenced throughout the plan, and more specifically in the descriptions of each Management Unit (and zones within), recommendations regarding their mitigation are beyond the purview of the study. They have, nonetheless, been flagged so that appropriate investigations / actions can be considered in due course.*





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## 1.0 INTRODUCTION

### 1.1 Purpose of the Plan

Ecological Perspective was engaged by the Walkerville Foreshore Committee of Management (henceforth, referred to as the Committee) to prepare a *Vegetation Management Plan* for the Walkerville Foreshore Reserve in South Gippsland. The flora and fauna and landscape and amenity values of the site have previously been documented by DEPI (2014) and Tract Consultants (2018). The purpose of the current study was to determine the currency of known vegetation values and threats at the site, and in accordance with these findings, to prepare new management recommendations that seek to enhance and sustain these values, as well as visitor amenity. The resulting plan includes: a description of the site; a synopsis of flora (and to a lesser extent, fauna values) supported by the site; a description of threatening processes as they pertain to the described values; a management vision and objectives for the subject area; a précis of management strategies; and a set of proposed management actions that were designed to achieve the stated objectives. The term of the plan is five years, with consideration given to an *ongoing maintenance period* of a further five years.

Note: the scope of the current plan differs to those prepared by DEPI (2014) and Tract Consultants (2018); themes such as cultural heritage management and fire management are covered in the *Walkerville North Reserve Master Plan* (for example), however, are not addressed in the current plan. Similarly, other known issues such as coastal erosion along Bayside Drive, and the bank slumping on the north side of Bayside Drive, have also been excluded as their mitigation requires detailed technical investigation / advice that is beyond the scope of the authors.

### 1.2 Plan Preparation

To inform preparation of the vegetation management plan, a review of the previous plans for the site was completed. Supplementary tasks included searches of the Victorian Biodiversity Atlas (VBA) (DELWP, 2023a - f) to identify flora and fauna that had been previously recorded within the Foreshore Reserve, as well as rare and threatened flora and fauna species that have been recorded within a 5-kilometre radius of the site. Similar searches were completed to identify vegetation types that were common to the study area (e.g. predictive mapping by the Department of Environment, Land Water and Planning (DEECA), 2023) was reviewed), and historic vegetation descriptions such as those compiled as part of the *Gippsland Regional Forest Agreement* (RFA, 1999), were revisited.

Field surveys were also completed from October – December 2023, when the length of the reserve was traversed on foot. During the course of these site visits, remnant native vegetation was identified and assigned to Ecological Vegetation Classes (EVCs) with consideration to predictive vegetation mapping undertaken by DEECA (2023) and EVC benchmarks for the Strzelecki Ranges and Gippsland Plain Bioregion (DSE, 2012a and DSE, 2012b). Vegetation was also mapped into broad condition classes that consider the amenity of the site. Flora lists were also compiled, and the extant distribution of *priority weeds* was mapped. Populations of these, and the location/(s) of other features of interest (such as rare and threatened and significant flora), were spatially referenced with a Garmin GPSMAP78S handheld GPS (GDA2020 MGA Zone 55 Datum and Projection). Following the field surveys, the noxious status of recorded weeds under the *Catchment and Land Protection Act 1994* (Vic) (CALP Act 1994) (Agriculture Victoria, 2017) was determined, as was their status as *Weeds of National Significance* (WONS) (Weeds Australia, 2023). Rankings were also assigned as per the non-statutory classification the Advisory List of environmental weeds in Victoria<sup>4</sup> (White *et al.*, 2022).



### 1.3 Nomenclature and Conservation Listings

The Bioregional Conservation Status of EVCs referenced in this report is as per DSE (2004a). Status is determined with reference to the Bioregion where an EVC occurs and is a measure of the current extent and quality for the EVC, when compared to its original (pre-1750) extent and condition (DSE, 2004a). A description of the categories used to describe Bioregional Conservation Status is provided in Box 1.

#### Box 1 Bioregional Conservation Status Categories for Ecological Vegetation Classes (EVCs) (source: DSE, 2004a)

|                         |   |
|-------------------------|---|
| <b>Presumed Extinct</b> | Probably no longer present in the bioregion   |
| <b>Endangered</b>       | Contracted to less than 10% of former range; OR<br>Less than 10% pre-European extent remains; OR<br>Combination of depletion, degradation, current threats and rarity is comparable overall to the above: <ul style="list-style-type: none"> <li>• 10 to 30% pre-European extent remains and severely degraded over a majority of this area; or</li> <li>• naturally restricted EVC reduced to 30% or less of former range and moderately degraded over a majority of this area; or</li> <li>• rare EVC cleared and/or moderately degraded over a majority of former area.</li> </ul>   |
| <b>Vulnerable</b>       | 10 to 30% pre-European extent remains; OR Combination of depletion, degradation, current threats and rarity is comparable overall to the above: <ul style="list-style-type: none"> <li>• greater than 30% and up to 50% pre-European extent remains and moderately degraded over a majority of this area; or</li> <li>• greater than 50% pre-European extent remains and severely degraded over a majority of this area; or</li> <li>• naturally restricted EVC where greater than 30% pre-European extent remains and moderately degraded over a majority of this area; or</li> <li>• rare EVC cleared and/or moderately degraded over a minority of former area.</li> </ul> |
| <b>Depleted</b>         | Greater than 30% and up to 50% pre-European extent remains; OR<br>Combination of depletion, degradation and current threats is comparable overall to the above and: <ul style="list-style-type: none"> <li>• greater than 50% pre-European extent remains</li> <li>• and moderately degraded over a majority of this area.</li> </ul>   |
| <b>Rare</b>             | Rare EVC (as defined by geographic occurrence) but neither depleted, degraded nor currently threatened to an extent that would qualify as Endangered, Vulnerable or Depleted.   |
| <b>Least Concern</b>    | Greater than 50% pre-European extent remains and subject to little to no degradation over a majority of this area   |

Plant taxonomy follows the Flora of Victoria, Royal Botanic Gardens Victoria (VicFlora, 2023) and the Victorian Biodiversity Atlas (DELWP, 2022c). Generally reporting of flora follows the convention *Scientific Name* (Common Name). An asterisk (\*) prefix denotes flora species of exotic origin, and a hash (#) denotes those that are native, but where some stands may be alien.

Common Names and Life Forms are as per the Victorian Biodiversity Atlas (DELWP, 2022c). A description of the categories used to describe life forms is provided in Table 5.

**Table 1 Vic Life Form categories (source: DSE, 2004b)**

| Life Form                           | Description   |
|-------------------------------------|---|
| Tree or Large Shrub                 | Woody plants greater than 5 m in height, with single stems that never form part of the tree canopy.   |
| Medium Shrub                        | Woody plants between 1 m and 5 m in height.   |
| Small Shrub                         | More or less erect, woody plants that are between 20 cm and 1 m in height.  |
| Prostrate Shrub                     | Woody plants with stems and branches that often trail along the ground and do not exceed 20 cm in height.   |
| Large Herb                          | More or less erect, non-woody plants with non-grassy leaves, greater than 50 cm tall.   |
| Medium Herb                         | More or less erect, non-woody plants with non-grassy leaves, between 5 cm and 50 cm tall  |
| Small or Prostrate Herb             | More or less erect, non-woody plants with non-grassy leaves, less than 5 cm in height. Many of this group are ephemerals (i.e. germinate, reproduce and die within a few weeks). The group includes prostrate and carpet-forming herbs.   |
| Large Tufted Graminoid              | A robust grass, sedge, rush or similar, usually with more than one flower stalk. Usually large numbers of leaves arising from a common, often broad base or clump, more than 1m tall. Includes trunked <i>Xanthorrhoea</i> spp. and palm-like sedges, such as <i>Gahnia clarkei</i> .                           |
| Medium to Small Tufted Graminoid    | A grass, sedge, rush or similar, usually with more than one flower stalk. Usually large numbers of leaves arising from a common base or clump, between 10 cm and 1 m tall.  |
| Large Non-Tufted Graminoid          | A robust grass or sedge, with leaves arranged along single, erect flower stalks, which in turn arise from rhizomes or stolons (creeping above or below ground stems), more than 1 m tall.   |
| Medium to Tiny Non-Tufted Graminoid | A grass, sedge, rush or similar with leaves arranged along single, erect flower stalks, which in turn arise from rhizomes or stolons (creeping above or below ground stems), not exceeding 1 m tall. Also, includes plants with a few grass-like leaves arising from a common base (e.g. some lilies, orchids). |
| Ground Fern                         | A fern-like non-flowering plant, usually with several to many fronds (i.e. Deeply divided into leaflets or segments) arising from a common base. Usually growing less than 1 m.   |
| Tree Fern                           | A large tree-like fern or palm, with a distinct, fibrous or scaly trunk (made up of the persistent leaf bases) and a crown of very large divided fronds or leaves.  |
| Epiphyte                            | A plant that grows entirely upon other plants (root system not immersed in the soil or water). Includes aerial parasites, such as mistletoes but not dodder laurels (included under scrambler or climber).  |
| Scrambler or Climber                | Woody or non-woody plants that rely upon other plants (dead or alive) or other structures (rocks or logs) for support. The main difference between this category and plants described as 'prostrate', is the habit of using other plants to lean on or climb. Species in this group may form dense colonies.    |

In text references to fauna follow the convention Common Name (*Scientific Name*). An asterisk (\*) prefix denotes fauna species of introduced origin.

The conservation status of flora and fauna species referenced in the report is as per the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999) and *Flora and Fauna Guarantee Act 1988* (FFG Act 1988) (see Box 2)<sup>1</sup>. Where presented as acronyms, those shown in upper case reference the conservation status on the EPBC Act 1999, while those in lower case reference the FFG Act 1988. A description of the *Categories* used to describe *Conservation Status* under the Acts is provided in Box 2.

<sup>1</sup> Note: the *FFG Act 1988 – Threatened List* that is referenced in this report is the updated version released by DELWP in September 2022. The Victorian Advisory Lists were revoked upon release of an October 2021 version of this document and were replaced by the new list which contains a single comprehensive list of threatened flora and fauna species for Victoria. As per DELWP (2022c), in the new list, the listing categories and criteria for species (but not communities) align with those set out in the Common Assessment Method (CAM), and the CAM Categories and criteria match the *International Union for the Conservation of Nature (IUCN) Red List categories*.

**Box 2 Conservation Categories for Flora and Fauna Species as per the EPBC Act 1999 and FFG Act 1988 (source: IUCN, 2018, EPBC Act 1999)**

| Category of Threat          | Description  |
|-----------------------------|--|
| Extinct (EX)                | A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.  |
| Extinct in the Wild (EW)    | A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range. A taxon is presumed Extinct in the Wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.  |
| Critically Endangered (CR)  | A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see Section V), and it is therefore considered to be facing an extremely high risk of extinction in the wild.  |
| Endangered (EN)             | A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V), and it is therefore considered to be facing a very high risk of extinction in the wild.  |
| Vulnerable (VU)             | A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable (see Section V), and it is therefore considered to be facing a high risk of extinction in the wild.   |
| Conservation Dependent (CD) | A native species is eligible for listing in the Conservation Dependent category if it meets the requirements of section 179(6)(b) of the EPBC Act. That is, it must be a species of fish that is the focus of a plan of management in force under law, which provides for management actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long term survival in nature are maximised, and the cessation of which would adversely affect the conservation status of the species. |

## 2.0 SITE DESCRIPTION

### 2.1 Site Context



**Figure 1 Walkerville Foreshore Reserve, October 2023**

The Committee are responsible for managing the Walkerville Foreshore Reserve, a coastal reserve that is approximately 41.3 hectares in size, and which runs parallel to the coast between the townships of Walkerville North and Walkerville South, in South Gippsland (see Figure 2, page 6). The Foreshore Reserve comprises of several large blocks of remnant vegetation that extend upslope and adjoin Cape Liptrap Coastal Park to the west, and also encompasses areas of the foreshore at both Walkerville and South Walkerville. The Reserve includes a dedicated camping and caravan park which has both powered and non-powered camp sites (namely, the Walkerville Camping Reserve) to the north, two boat ramps (at Walkerville North and Walkerville South, respectively), public toilets at Walkerville South, and numerous picnic areas. The site also has a range of formal and informal access points to the beach.

The Foreshore Reserve is principally located in the Strzelecki Ranges Bioregion, however lies close to the Gippsland Plain Bioregion. It falls within the jurisdiction of the West Gippsland Catchment Management Authority, and lies within the South Gippsland Shire. The site comprises of numerous land parcels that are zoned for *Public Conservation and Resource* under the South Gippsland Shire Planning Scheme (Department of Transport and Planning, 2023).

For the purposes of this plan, the Foreshore Reserve has been divided into three discrete management units in accordance with stipulations by the Committee; namely, the Northern Unit, Central Unit and Southern Unit. The extent of each unit is shown in Figure 3 (page 7), and reference is made to the units throughout the discussion of values and threats within the Foreshore Reserve, and as pertains to ongoing management.



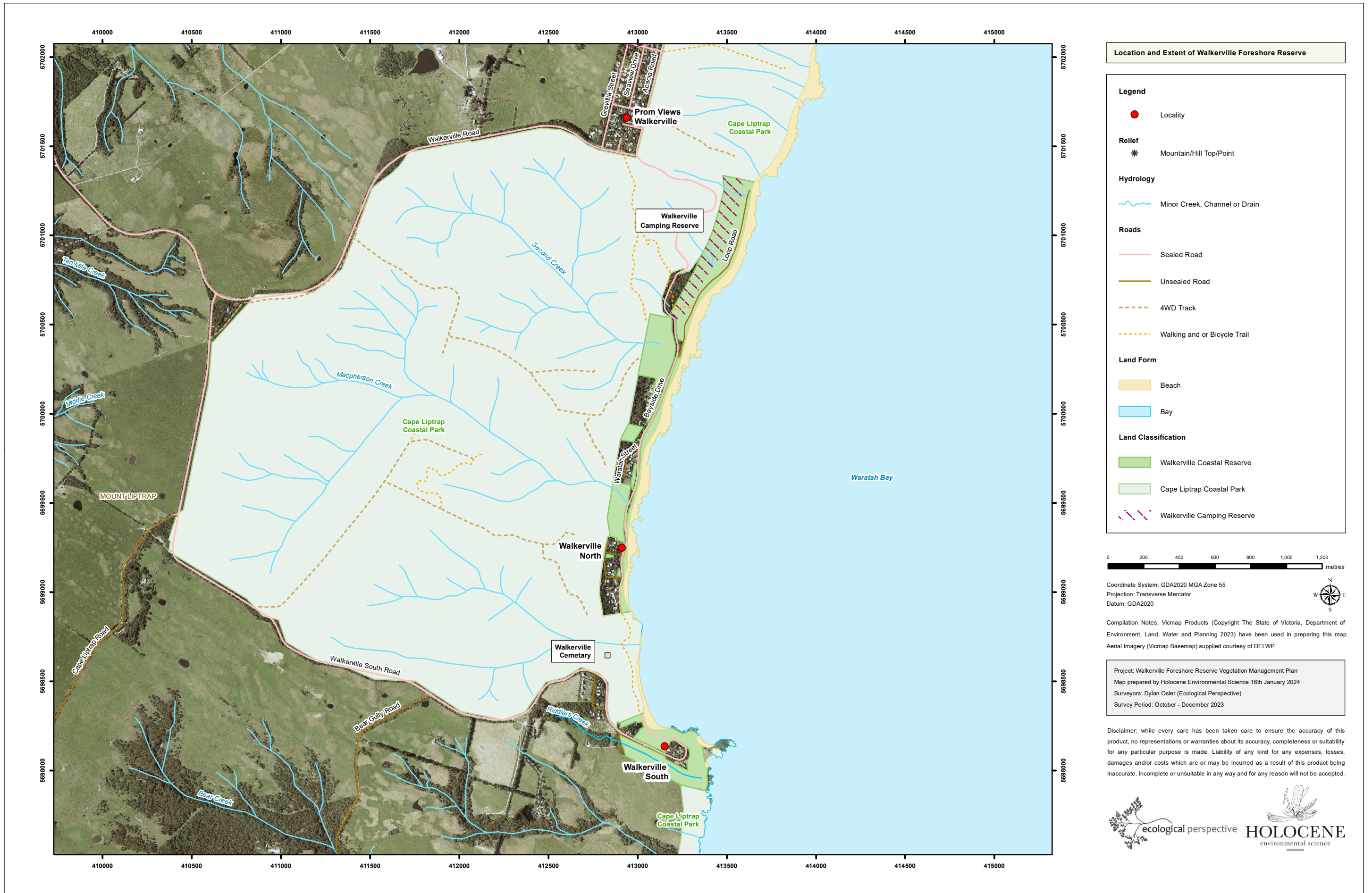


Figure 2 Location of Walkerville Foreshore Reserve



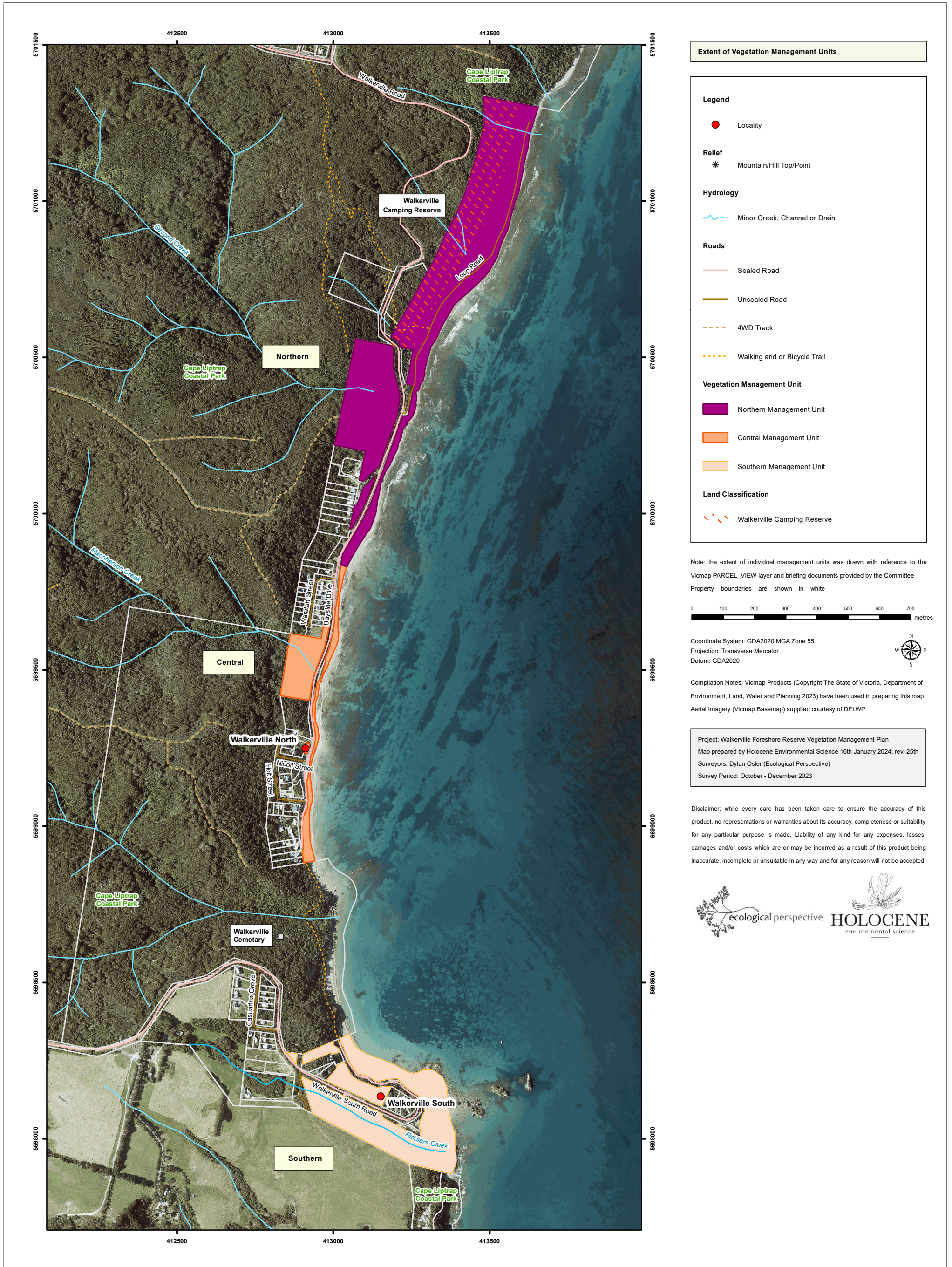


Figure 3 Extent of Vegetation Management Units, Walkerville Foreshore Reserve



Notably, the areas surrounding the Foreshore Reserve have a combination of private and public tenure. The southern parts of the Reserve at South Walkerville, for example, abut grazed farm lands, while large areas to the north and west of the Reserve flank large blocks of remnant vegetation with Cape Liptrap Coastal Park. Of the privately-owned properties that neighbour the Reserve, many comprise of a high proportion of bushland, or are (otherwise) well vegetated; with numerous of these being holiday homes.

The unique landscape and cultural heritage of the Walkerville region (and through to Cape Liptrap more broadly), has been well documented (see for example, DEPI (2014) and Tract Consultants (2018)). Key features, for example, include:

- The Lime Kilns and associated historical features that are of *State significance* and included on the *Victorian Heritage Register* (H2043);
- Landscape values that were categorised as of *State Significance* in the Coastal Spaces study of the Victorian coast (Planisphere/DSE 2006); and
- The section of the coastline from Arch Rock to Walkerville North which is considered a *Geoheritage Site of National Significance* (*pers. comm*, N. Rosengren).

With respect to the Foreshore Reserve itself, an account of historical and current operations is provided by DEPI (2014, p. 19):

"The major early impacts of European settlement were stock grazing and the operation of six lime kilns at South and one near Digger Island. The remains of the kilns and associated village at South are of State significance. The activities associated with lime burning have been well documented (Fleming 1975, Sharrock 1987, Harington 2000, Ward 2001/2003) and many photographs remain dating back to about 1900.

At Waratah (Walkerville South), lime burning was associated with the formation of an isolated settlement which ultimately declined with the industry it served. Whilst the majority of buildings remained at least until the Second World War, they were progressively removed thereafter. Today, the kilns survive as the principal relics. (Ward 2003) Other relics in the Foreshore Reserve include stone walls and remains of several buildings. Ongoing protection and conservation of these relics is important. Many plants also remain from the 1920s including figs, nasturtiums, mint, Abizzia and various bulbs, providing a link with the past.

Following closure of the lime operations in 1927, the population dwindled and the area was largely forgotten. The importance of the kilns and associated township, cemetery and quarry have been recognised in more recent times. Conservation works were commenced in 1993-4 and a conservation plan prepared (Ward 2003). Interpretation signs have also been installed since the 2001 management plan was prepared to enhance appreciation of the lime-burning era. There are opportunities for the Committee to provide additional on-site interpretation of relics at South, and to encourage further research on local history."

## 2.2 Natural Environment

DEPI (2014, p. 15) provide the following characterisation of the geology and landforms of the Walkerville area:

"The Walkerville area has complex geology and landforms, the full extent of which is beyond the scope the current study. The oldest rocks along the Victorian coast, 570-million-year-old Cambrian greenstones, are exposed south of Bird Rock. Three types of early limestone have also been identified in the area including Waratah Limestone, which was extensively

quarried for lime from 1878. The striking rock-stacks at Bird Rock were formed when softer limestone was gradually eroded by wave action. The sandstone and mudstone shore platforms at North are part of the 400-million-year-old Liptrap Formation and show strong bedding and folding. The Waratah Fault visible at the Bluff (in Cape Liptrap Coastal Park) is considered to be the best exposure of a fault in Victoria (Wallis, pers. comm.). The Walkerville area provides outstanding opportunities for interpretation and education and there are opportunities to increase use by educational groups.”

Other environmental / climatic factors that have influenced the extant condition of the study area, include high rainfall, with the mean rainfall at Walkerville ranging between 944 mm per year (at Cape Liptrap Weather Station-Illawong) and 938 mm per year (at Cape Liptrap, 360 Degrees). Notably, this rainfall, coupled with coastal meteorological influences, have contributed to locally high moisture levels, that are reflected in the composition of vegetation in the area. Principally, they have afforded the presence of a diverse flora that is typically associated with sheltered wet forest types. These conditions have also influenced the extent of sub-soil seepage at the break of slope across the Waratah Bay area.



**Figure 4 Macpherson Gully, Walkerville Foreshore Reserve, October 2023**

Key taxa include *Eucalyptus obliqua* (Messmate Stringybark) in the foreground, with *Pomaderris aspera* (Hazel Pomaderris), *Acacia melanoxydon* (Blackwood) and *Pittosporum undulatum* (Sweet Pittosporum).

Of note, two named waterways (i.e. MacPhersons Creek and Second Creek) flow through the lower reaches of the Foreshore Reserve; with the catchments of both found within the Cape Liptrap Coastal Park. There are a number of other minor gully lines that occur throughout the Reserve, where these have varying levels of seasonal flow and associated remnant vegetation.

There is groundwater seepage at the break of slope at several locations, including around the Walkerville Camping Reserve. The presence of the endangered vegetation type *Riparian Fern Scrub* (which contains some very mature stands of old Paper-barks, and provides habitat for extensive colonies of Burrowing Crayfish (*Engaeus* spp.)) provides an excellent indication of the volume of groundwater seepage that is occurring in these areas. While gully lines and creeks are more



limited in Walkerville South, there are two unnamed seasonal gully lines; one occurs south of Walkerville South Road, and there are two small gullies upslope of the Walkerville South Boat Ramp. Saliiently, during the 2023 site visits, there was evidence of a marked increase in deer activity and damage along the gully lines and in areas with ground water seepage.



Figure 5 Second Creek, Walkerville Foreshore Reserve, October 2023

### 2.3 Management History

The scope of historic interventive vegetation management across the Foreshore Reserve has been varied, and in large parts, has been limited to maintaining the amenity of high use areas (e.g. slashing and vegetation removal proximate to walking tracks), with targeted weed removal and revegetation also completed at a number of locations (e.g. rock-beaching (see Figure 6, page 11), and revegetation within the Camping Reserve). The focus of works in recent years, has been the targeted control of a subset of the *high priority environmental weeds* known from the Reserve, however, many of the recorded infestations will require follow-up treatment or ongoing management over the longer-term.

Saliiently, the nature of both historic and future *on-ground works* is varied, and will require the engagement of an array of different contractors that specialise in the maintenance of key assets such as car parks, boat ramps, and toilet blocks, as well as skilled bushland practioners that are adept at *sensitively* managing vegetation of high ecological value that provides habitat for a diverse range of flora and fauna.





**Figure 6** An example of rock walling, Central Management Unit, Walkerville Foreshore Reserve, October 2023



**Figure 7** The track to the toilet block, Southern Management Unit, Walkerville Foreshore Reserve, November 2023

There is some stonework in the foreground and *Myoporum insulare* (Common Boobialla) falling across track. Example where vegetation could be cleared back from the track.



### 3.0 FLORA VALUES

#### 3.1 Ecological Vegetation Classes

During the site visits completed from October to December 2023, the Walkerville Foreshore Reserve was found to support eleven EVCs; namely, Coast Banksia Woodland (EVC 2), Coastal Dune Scrub (EVC 160), Coastal Headland Scrub (EVC 161), Damp Forest (EVC 29), Damp Heathy Woodland (EVC 793), Damp Melaleuca Scrub (EVC 949), Lowland Forest (EVC 16), Riparian Fern Scrub (EVC A120), Riparian Thicket (EVC 59), Sand Heathland (EVC 6), and Warm Temperate Rainforest (syn. Littoral Rainforest) (EVC 32) (Table 2). It was also found to support a twelfth vegetation type, Tree Fern Gully, that was floristically distinct from the documented benchmarks for the bioregion.

**Table 2 Ecological Vegetation Classes recorded within the Walkerville Foreshore Reserve, by management unit, October – December 2023**

| Ecological Vegetation Class                          | Number | Bioregional Conservation Status <sup>^</sup> | Distribution and Extent   | Management Unit |         |          |
|--|--------|--|---|-----------------|---------|----------|
|  |        |  |   | Northern        | Central | Southern |
| Coast Banksia Woodland                               | 2      | Vulnerable                                   | Largely restricted to Walkerville North on the lower terrace between Coastal Dune Scrub and EVCs upslope. Large, modified areas within the Camping Reserve. | yes             | yes     |          |
| Coastal Dune Scrub                                   | 160    | Depleted (GipP)                              | Limited to a linear strip along Walkerville North – Bayside Drive. Increasingly fragmented and prone to coastal erosion.                                    | yes             | yes     |          |
| Coastal Headland Scrub                               | 161    | Vulnerable                                   | Large extent of cliffed areas and upslope on exposed hills. There are two distinct floristic assemblages; namely South Gippsland and Walkerville.           | yes             | yes     | yes      |
| Damp Forest  | 29     | Least Concern                                | Sheltered slopes and adjacent gully lines, fairly restricted with its extent.   | yes             |         | yes      |
| Damp Heathy Woodland                                 | 793    | Depleted                                     | Restricted to the more elevated areas of Walkerville South.   |                 |         | yes      |
| Damp Melaleuca Scrub                                 | 949    | Not assigned                                 | Derived example of the EVC: restricted to small area in the south.  |                 |         | yes      |
| Lowland Forest                                       | 16     | Vulnerable                                   | Widespread and one the more common EVCs within the Foreshore Reserve.   | yes             | yes     | yes      |
| Riparian Fern Scrub                                  | A120   | Endangered (GipP) <sup>^^</sup>              | Restricted to the break of slope where there is sufficient ground water seepage. Most prominently Walkerville North and within the Camping Reserve.         | yes             |         | yes      |
| Riparian Thicket                                     | 59     | Vulnerable                                   | Restricted to small area in the south.  |                 |         | yes      |
| Sand Heathland                                       | 6      | Rare (GipP)                                  | Restricted to small, exposed areas with deep sands.   | yes             |         |          |
| Tree Fern Gully                                      | NA     | Not assigned                                 | Restricted to minor gullies in the north and south.   | yes             |         | yes      |
| Warm Temperate Rainforest (syn. Littoral Rainforest) | 32     | Endangered                                   | Occupies areas along both major and minor gully lines.  | yes             | yes     |          |

<sup>^</sup> Bioregional conservation status for the Strzelecki Ranges (Strz) Bioregion as per DSE (2004) unless otherwise stated; in the latter instance, Bioregional conservation status is for the Gippsland Plain (GipP) Bioregion as per DSE (2004). <sup>^^</sup> Status as per Frood and Papas (2016)

Of the EVCs present, several (including Coast Banksia Woodland, Coastal Headland Scrub, Lowland Forest and Riparian Thicket) have a *bioregional conservation status* of *Vulnerable* in the Strzelecki Ranges bioregion, while Damp Heathy Woodland is considered *Depleted*, and Warm Temperate Rainforest, *Endangered*.

A brief description of the structural and floristic composition of each EVC is provided in the succeeding pages. As appropriate, reference is made to the descriptions provided in the relevant Benchmarks for each EVC (as per DSE, 2012a; DSE 2012b; and Frood and Papas, 2016), as well as site-specific floristics and condition. The spatial distribution of the EVCs is depicted in Figure 8 to Figure 10 (page 14 to page 16), for each of the three management units in turn. For Coast Banksia Woodland and Riparian Fern Scrub, a distinction has been made between 'more intact' examples and 'modified' examples of the two vegetation types.

Overall, the Walkerville Foreshore Reserve was found to support a diverse range of vegetation types, where these occur across a relatively small and narrow area. The underlying geology of the Walkerville and Waratah Bay area, and also larger Cape Liptrap Coastal Park, coupled with the varied geomorphology and hydrology, and localised climatic conditions (e.g. orographic), have led to the area sustaining a diverse and uncommon assemblage of communities. The wide array of sheltered environs / habitats has also contributed to the richness of flora within the reserve and immediate surrounds.

Saliently, as the recorded vegetation types do not often occur in close association across the South Gippsland region, there were several instances where current EVC typology failed to adequately represent the assembled flora, or where the assembled flora was inconsistent with the EVC benchmarks for the bioregion. EVC assignment and the demarcation of boundaries between EVCs was also confounded by several taxa (as well as some vegetation communities) occurring at the outer extent of their *known geographic range*. For example, with respect to the former, the population of *Banksia serrata* (Saw Banksia) within the study area occurs at the western extent of its natural range, and consequently does not neatly align with the EVCs the taxon is typically associated with. Past land management is also likely to have influenced some aspects of vegetation structure and age class, and also reduced the cover and richness of *character species* indicative of the various EVCs; again, confounding EVC assignment.



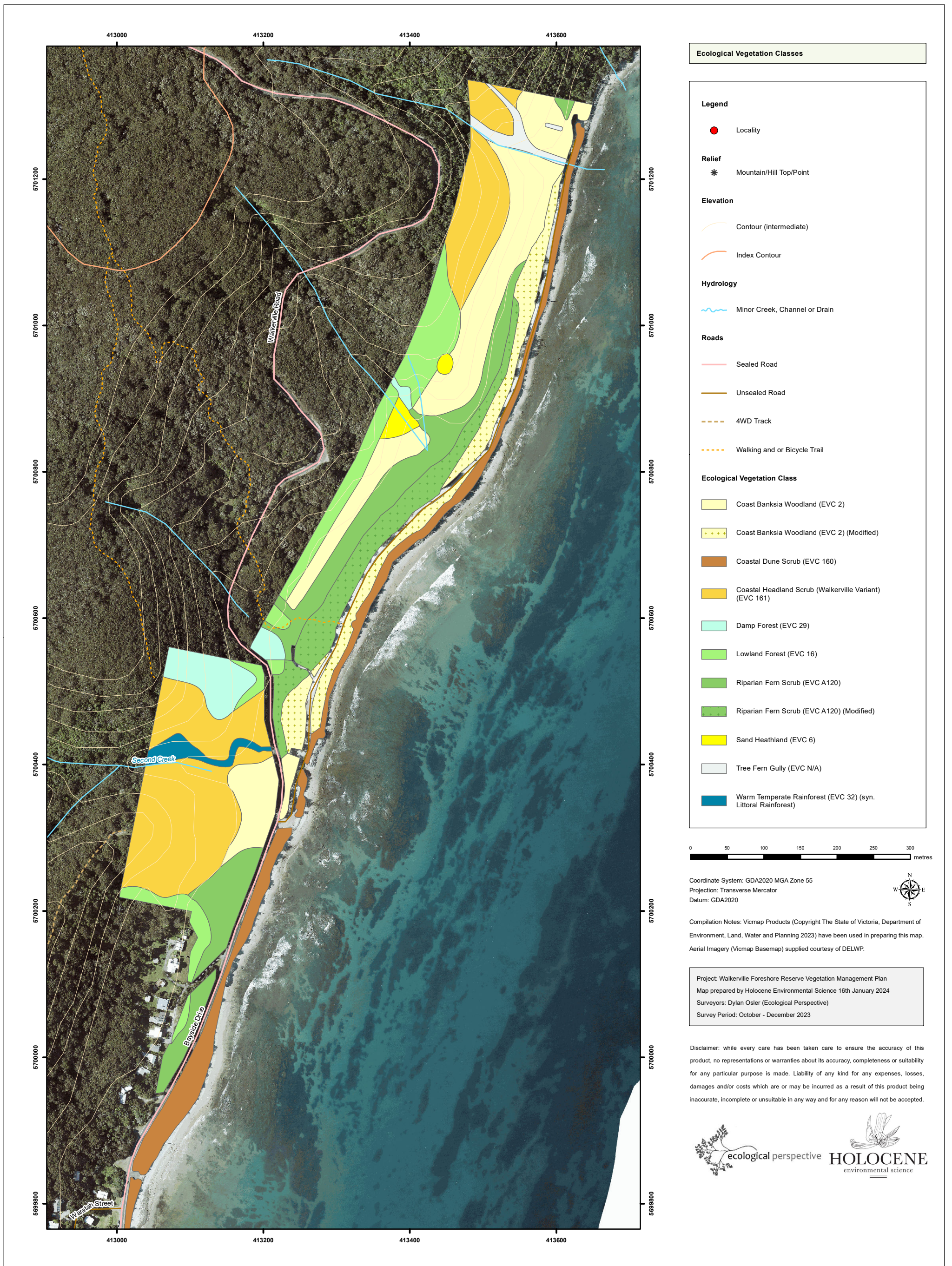


Figure 8 Distribution of Ecological Vegetation Classes, Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023



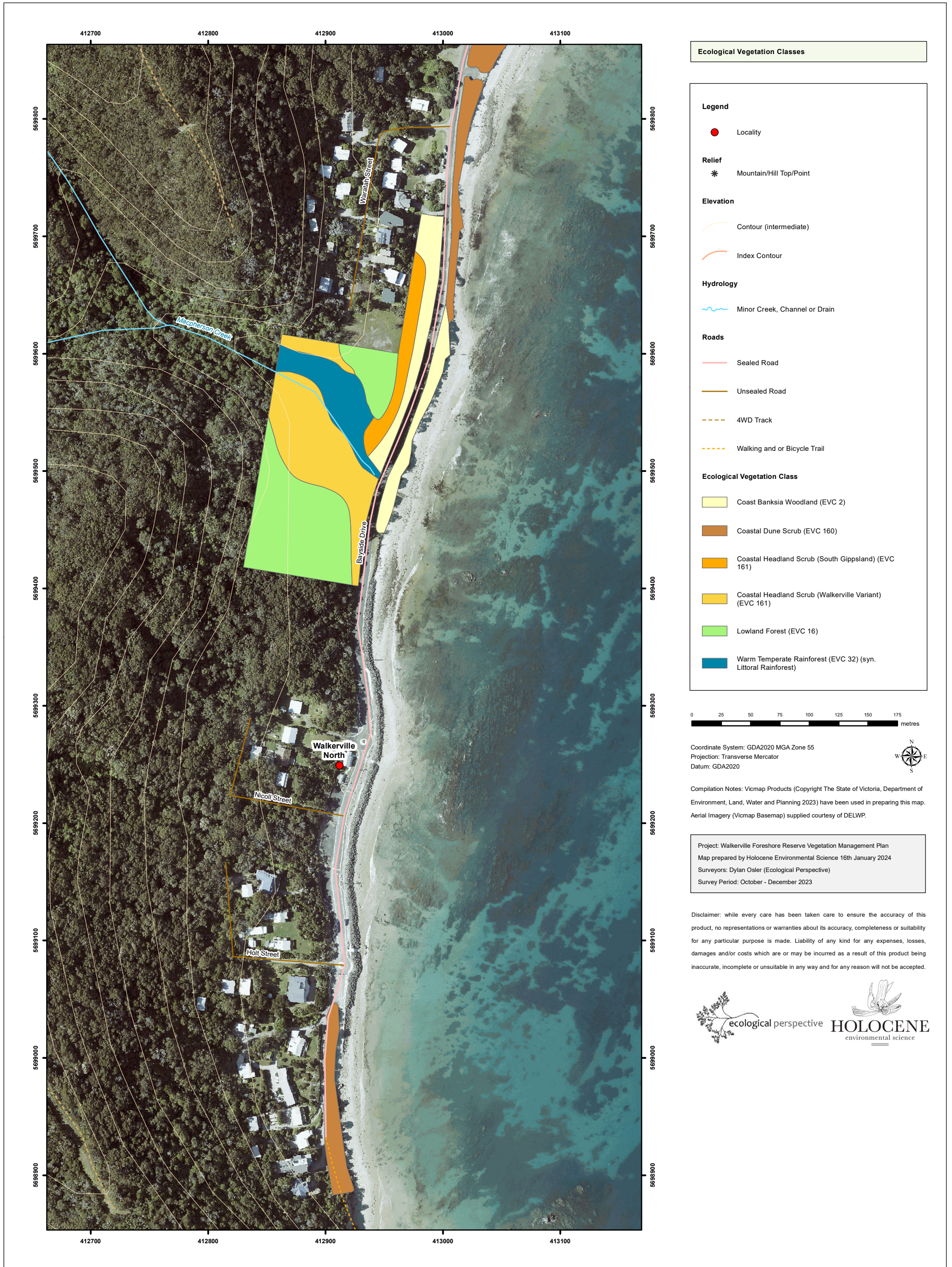


Figure 9 Distribution of Ecological Vegetation Classes, Central Management Unit, Walkerville Foreshore Reserve, October – December 2023



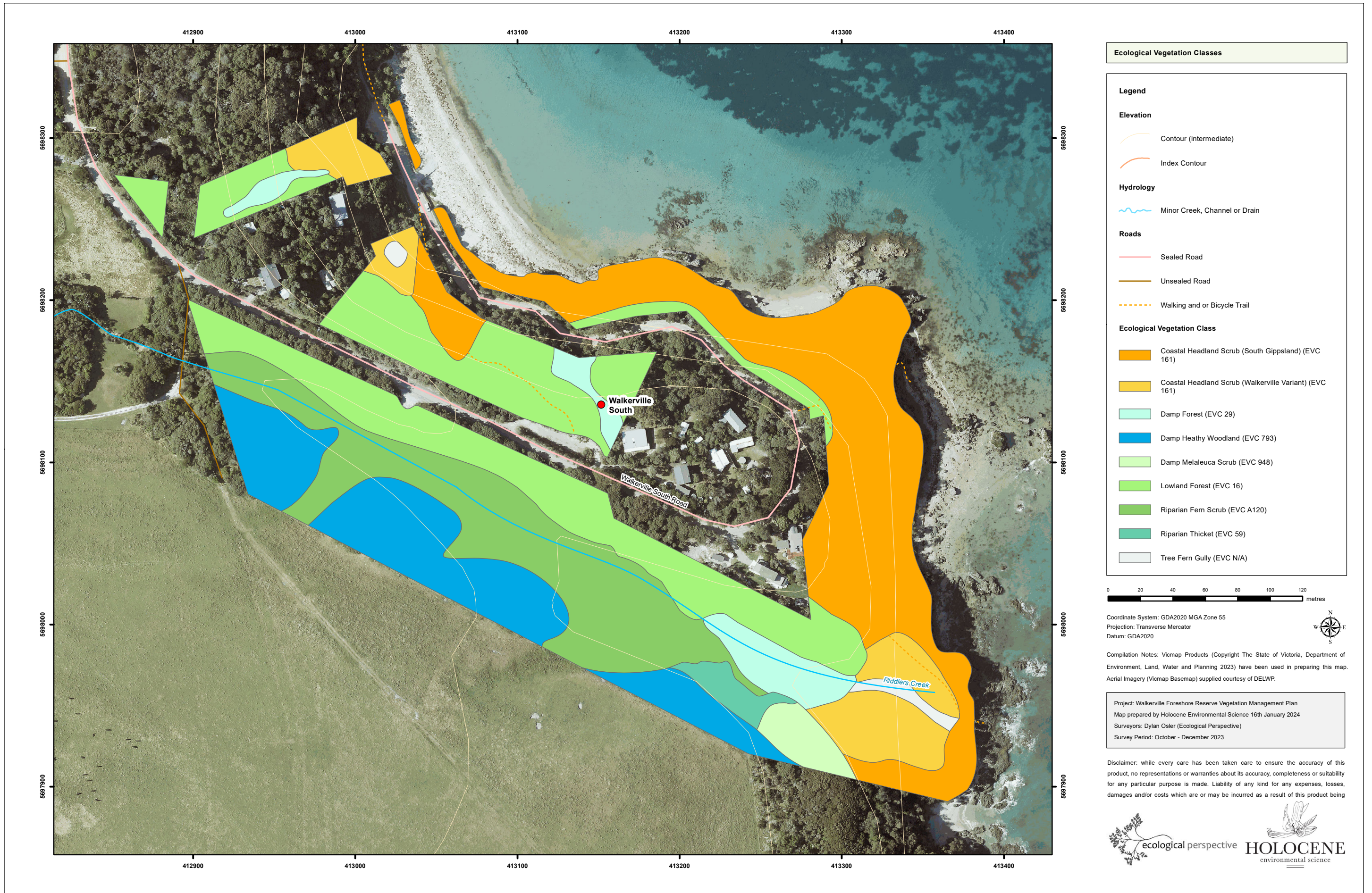


Figure 10 Distribution of Ecological Vegetation Classes, Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023



## Coast Banksia Woodland (EVC 2)



**Figure 11 Coast Banksia Woodland (EVC 2), Walkerville Foreshore Reserve, December 2022**

Coast Banksia Woodland is a woodland that is typically dominated by an overstorey of *Banksia integrifolia* (Coast Banksia) that grows to 15 metres tall. This layer lies above a medium shrub component and an understorey comprised of herbs, sedges and scramblers (DSE, 2012b). As per the benchmark for the vegetation type, Coast Banksia Woodland is generally restricted to near coastal localities, and occupies secondary or tertiary dunes behind Coastal Dune Scrub.

During the 2023 site visits, Coast Banksia Woodland was found to be largely restricted to Walkerville North (i.e. the Northern Management Unit), where it occurred on the lower terraces between Coastal Dune Scrub and the EVCs further upslope. Notably, there was marked variation in the condition of the vegetation type, with large modified sections found within the boundary of the Walkerville Camping Reserve.

When inspected in 2023, examples of Coast Banksia Woodland within the study area were routinely found to be dominated by *Banksia integrifolia* (Coast Banksia); although, *Bursaria spinosa* subsp. *spinosa* var. *macrophylla* (Tree Bursaria), *Allocasuarina verticillata* (Drooping Sheoak) and *Leptospermum laevigatum* (Coast Tea-tree) were often also present. Taxa such as *Pteridium esculentum* subsp. *esculentum* (Austral Bracken), *Lomandra longifolia* (Spiny-headed Mat-rush), *Ficinia nodosa* (Knobby Club-rush), *Poa labillardierei* (Common Tussock-grass) and *Tetragonia implexicoma* (Bower Spinach) were amongst the dominant ground flora, with a range of small herbs also variously present.



## Coastal Dune Scrub (EVC 160)



**Figure 12 Coastal Dune Scrub (EVC 160), Walkerville Foreshore Reserve, October 2023**

This photograph was taken proximate to Bayside Drive, approximately 20 metres north of Waratah Street, within the Central Management Unit. Dominant taxa included *Leucopogon parviflorus* (Coastal Beard-heath), *Myoporum insulare* (Common Boobialla), *Lepidosperma gladiatum* (Coastal Sword-sedge), *Poa poiformis* var. *poiformis* (Coast Tussock-grass) and *Rubus parvifolius* (Small-leaf Bramble).

As described in the benchmark for the EVC, Coastal Dune Scrub is a closed scrub to 5 metres tall, with occasional emergents (DSE, 2012a). Coastal Dune Scrub occupies secondary dunes along ocean and bay beaches, and lake shores, and occurs on siliceous and calcareous sands that are subject to high levels of saltspray. It is subject to continuous disturbance from onshore winds.

Coastal Dune Scrub was mapped as occurring in the Northern and Central Management Units at Walkerville Foreshore Reserve in 2023, where it was limited to a narrow, linear band that ran proximate to the seaward-side of the Camping Reserve and along Bayside Drive. Saliiently, there was evidence that this vegetation type was subject to coastal erosion, and was becoming increasingly fragmented within the Foreshore Reserve.

The floristic composition of Coastal Dune Scrub was varied across the study area. Some areas were dominated by *Leptospermum laevigatum* (Coast Tea-tree), *Leucopogon parviflorus* (Coast Beard-heath) and *Banksia integrifolia* (Coast Banksia), as well as *Bursaria spinosa* subsp. *spinosa* var. *macrophylla* (Tree Bursaria). Comparably, the more open areas, which were transitional to Berm Grassy Shrubland, were dominated by taxa such as *Lomandra longifolia* (Spiny-headed Mat-rush), *Ficinia nodosa* (Knobby Club-rush), *Dianella* sp. aff. *revoluta* (Coastal) (Coast Flax-lily), *Spinifex sericeus* (Hairy Spinifex), *Carpobrotus rossii* (Karkalla), *Poa poiformis* var. *poiformis* (Coast Tussock-grass), *Lepidosperma gladiatum* (Coast Sword-sedge), *Imperata cylindrica* (Blady Grass), *Tetragonia implexicoma* (Bower Spinach), *Rhagodia candolleana* subsp. *candolleana* (Seaberry Salt-bush) and *Muehlenbeckia adpressa* (Climbing Lignum).



## Coastal Headland Scrub (EVC 161)

Coastal Headland Scrub was one of the more widespread and common vegetation types within the Foreshore Reserve, and in 2023 was mapped across all three management units; where it occupied cliffed areas and exposed hills further upslope. There were two distinct floristic assemblages within the study area; namely, South Gippsland and Walkerville.



Figure 13 Coastal Headland Scrub (EVC 161) (South Gippsland), Walkerville Foreshore Reserve, October 2023

### South Gippsland

The benchmark for the South Gippsland variant of Coastal Headland Scrub describes the vegetation type as a scrub or low shrubland to 2 metres tall that occurs on steep, rocky coastal headlands often associated with cliffs exposed to the stresses of extreme salt-laden winds and salt spray from the southwest (DSE, 2012b).

Within the study area, examples of this EVC were principally restricted to the limestone cliffs around South Walkerville and Bird Rock. The unusual limestone geology of this part of the coastline, which is not typical of the South Gippsland coast, renders this an unusual example of the EVC. Here, vegetation was principally dominated by an overstorey of *Allocasuarina verticillata* (Drooping Sheoak) and *Leptospermum laevigatum* (Coast Tea-tree); where the latter was dominant across the more disturbed areas. Small shrubs variously included *Pomaderris oraria* subsp. *oraria* (Bassian Pomaderris), *Alyxia buxifolia* (Sea Box), *Myoporum insulare* (Common Boobialla), *Senecio odoratus* (Scented Groundsel), *Olearia phlogopappa* subsp. *insularis* (Dusty Daisy-bush), *Olearia ramulosa* var. *ramulosa* (Twiggy Daisy-bush) and *Goodenia ovata* (Hop Goodenia). The grass and sedge component comprised of taxa such as *Austrostipa stipoides* (Prickly Spear-grass), *Austrostipa flavescens* (Coastal Spear-grass), *Lepidosperma sieberi* (Sandhill Sword-sedge), *Diplarrena moraea* (White Iris), *Dianella brevicaulis* (Small-flower Flax-lily) and *Poa poiformis* var. *poiformis* (Coast Tussock-grass).





**Figure 14 Coastal Headland Scrub (EVC 161) (Walkerville Variant), Walkerville Foreshore Reserve, October 2023**

This photograph was taken approximately 70 metres south of Second Creek, within the Northern Management Unit. Vegetation was dominated by *Bursaria spinosa* var. *macrophylla* (Tree Bursaria), *Monotoca glauca* (Currant Wood) and *Pteridium esculentum* (Austral Bracken).

#### Walkerville Variant

A second and floristically distinct variant of Coastal Headland Scrub was also observed during the 2023 site visits. The 'Walkerville Variant' of Coastal Headland Scrub had affinities with the sub-community described in the RFA (1999). As per the RFA (1999), the vegetation type is found in areas less prone to salt spray, where tall scrub develops, such as at Walkerville. It occurs on a range of geologies and at elevations between 20 and 40 metres above sea level. The average rainfall in areas where the sub-community occurs is 1000 mm, and the sub-community is described as intermediate in floristic composition between Lowland Forest and Coastal Dune Scrub Mosaic (RFA, 1999).

Notably, within the context of the Walkerville Foreshore Reserve, the Walkerville variant of Coastal Headland Scrub was more developed than suggested in the RFA (1999), and was typically found on the upper slopes between Lowland Forest, Coast Banksia Woodland and Tree-fern Gullies.

Within the study area, examples of this vegetation type were dominated by a mix of with *Bursaria spinosa* subsp. *spinosa* var. *macrophylla* (Tree Bursaria), *Allocasuarina verticillata* (Drooping Sheoak), *Monotoca glauca* (Currant-wood), *Acacia verticillata* (Prickly Moses), *Daviesia ulicifolia* (Gorse Bitter-pea) (restricted) and *Platylobium parviflorum* (Narrow-leaf Flat-pea). The ground layer included a range of graminoids such as *Poa labillardierei* (Common Tussock-grass), *Microlaena stipoides* var. *stipoides* (Weeping Grass), *Lomandra longifolia* (Spiny-headed Mat-rush), *Lepidosperma elatius* (Tall Sword-sedge), *Gahnia sieberiana* (Red-fruited Saw-sedge) and *Diplarrena moraea* (White Iris).



## Damp Forest (EVC 29)



Figure 15 Damp Forest (EVC 29), Walkerville Foreshore Reserve, October 2023

As described in the benchmark for the EVC, Damp Forest grows on a wide range of geologies on well-developed generally colluvial soils on a variety of aspects, from sea level to montane elevations (DSE, 2012b). This vegetation type is dominated by a eucalypt tree layer to 30 metres tall, which occurs over a medium to tall dense shrub layer of broad-leaved species typical of wet forest mixed with elements from dry forest types, and a ground layer that includes herbs and grasses as well as a variety of moisture-dependent ferns including occasional tree ferns (DSE, 2012b).

During the 2023 site visits, Damp Forest was found to be restricted to several small pockets in each of the Northern and Southern Management Units at the Walkerville Foreshore Reserve, where it occupied sheltered gully lines and lower slopes. Notably, where Damp Forest was present, it typically graded into other EVCs within the immediate landscape, making delineation of the boundaries of the vegetation type difficult.

Within the study area, the overstorey of Damp Forest was characterised by stands of *Eucalyptus obliqua* (Messmate), with *Eucalyptus radiata* (Narrow-leaf Peppermint) also present, although to a lesser extent. The composition of the middle and lower strata varied floristically, where this variation occurred in response to differences in aspect, surface geology, and fire frequency. Understorey species typical of the EVC, however, generally included *Pittosporum bicolor* (Banyalla), *Acacia melanoxylon* (Blackwood), *Coprosma quadrifida* (Prickly Currant-bush), *Lepidosperma elatius* (Tall Sword-sedge), *Cyathea australis* (Rough Tree-fern), *Calochlaena dubia* (Common Ground-fern), *Pteridium esculentum* (Austral Bracken), *Polystichum proliferum* (Mother Shield-fern) and *Blechnum cartilagineum* (Gristle Fern).



## Damp Heathy Woodland (EVC 793)



Figure 16 Damp Heathy Woodland (EVC 793), Walkerville Foreshore Reserve, January 2024

As described in the benchmark for the vegetation type, Damp Heathy Woodland is a woodland to 10 metres tall that has a tall dense heathy understorey, and a ground layer that comprises of grasses, herbs, small shrubs and tough-leaved monocots (DSE, 2012b). The EVC is common to developed sandy soils of moderate to low fertility and, as per DSE (2012b) is typically wet in winter due to the impeding soil layer, and dry in summer. It is known to transition to tall scrub in high rainfall areas when long unburnt. It recruits episodically with fire, with the desirable period between disturbance events circa 30 years (DSE, 2012b).

When inspected in 2023, Damp Heathy Woodland was found to be restricted to an elevated section along the south-western boundary of the Southern Management Unit at the Walkerville Foreshore Reserve. Notably, vegetation in this section of the reserve did not represent a typical example of the EVC; rather, vegetation composition and structure had been impacted by historic clearance, and was found to be transitioning into other adjoining EVCs. Damp Heathy Woodland was, however, observed to more widespread and common at Cape Liptrap Coastal Park, where there were more typical examples of the vegetation type.

Within the study area, the overstorey of Damp Forest was a mix of *Eucalyptus radiata* (Narrow-leaf Peppermint) and *Eucalyptus obliqua* (Messmate), with a secondary tree layer of *Banksia serrata* (Saw Banksia), *Bursaria spinosa* subsp. *macrophylla* (Tree Bursaria), *Allocasuarina littoralis* (Black Sheoak), *Leptospermum laevigatum* (Coast Tea-tree), *Leucopogon parviflorus* (Coast Beard-heath) and *Banksia integrifolia* (Coast Banksia). The ground layer had been highly modified, with a high proportion of pasture related grasses such as *\*Anthoxanthum odoratum* (Sweet Vernal-grass) now common. Elsewhere, the ground flora was dominated by taxa such as *Pteridium esculentum* subsp. *esculentum* (Austral Bracken) and *Xanthorrhoea australis* (Austral Grass-tree).



## Damp Melaleuca Scrub (EVC 948)



Figure 17 Damp Melaleuca Scrub (EVC 948), Walkerville Foreshore Reserve, January 2024

Damp Melaleuca Scrub is a low, grassy or bracken-dominated eucalypt forest or open woodland that reaches a height of up to 15 metres. It features a large shrub layer and a ground layer rich in herbs, grasses, and orchids. This vegetation type typically occurs in flat or undulating areas where there are moderately fertile, well-drained, deep sandy or loamy topsoils over heavier subsoils (referred to as duplex soils).

During the 2023 site visits, vegetation with affinities with Damp Melaleuca Scrub was found to be restricted to the Southern Management Unit of Walkerville Foreshore Reserve. A derived example of the vegetation type was mapped in the south-eastern corner of the unit, in a small pocket that lies between a section of Riparian Thicket and the adjoining farmlands. Here, vegetation comprised of dense low thickets of *Melaleuca ericifolia* (Swamp Paper-bark), with a sparse understorey that has (principally) been depleted by intense deer activity in the area.



## Lowland Forest (EVC 16)

Lowland Forest is a Eucalypt forest to 25 metres tall that occurs on a range of geologies and occupies a range of soil types (DSE, 2012b). As described in the benchmark for this EVC, examples of this vegetation type in the Strzelecki Ranges bioregion commonly have a heathy understorey that is characterised by a diversity of life forms and species including a range of shrubs, grasses and herbs. Within the Strzelecki Ranges, the EVC is typically restricted to north and north-westerly aspects (DSE, 2012b).



**Figure 18 Lowland Forest (EVC 16), Walkerville Foreshore Reserve, October 2023**

This photograph was taken approximately 40 metres south of Macpherson Creek, within the Central Management Unit. Key Taxa include *Eucalyptus obliqua* (Messmate Stringybark), with *Bursaria spinosa* (Sweet Bursaria), *Coprosma quadrifida* (Prickly Currant-bush), *Olearia lirata* (Showy Daisy-bush) and *Pteridium esculentum* (Austral Bracken).

Lowland Forest was one of the more widespread and common vegetation types within the Foreshore Reserve, and in 2023 was mapped across all three management units; where it generally occupied the upper slopes.

Within the study area, the overstorey of Lowland Forest was dominated by *Eucalyptus obliqua* (Messmate), with a sparse tree layer in most areas that comprised of species such as *Acacia melanoxylon* (Blackwood), *Bursaria spinosa* (Sweet Bursaria) and *Coprosma quadrifida* (Prickly Currant-bush). The ground layer was principally dominated by taxa such as *Pteridium esculentum* subsp. *esculentum* (Austral Bracken), *Xanthorrhoea australis* (Austral Grass-tree), *Lepidosperma elatius* (Tall Sword-sedge), *Lomandra longifolia* (Spiny-headed Mat-rush), *Diplarrena moraea* (White Iris), *Tetrarrhena juncea* (Forest Wire-grass), and *Gahnia sieberiana* (Red-fruited Saw-sedge), with a range of small herbs also present at low frequency.



## Riparian Fern Scrub (EVC A120)

The benchmark for Riparian Fern Scrub describes a dense tall shrubby vegetation with a primarily ferny ground-layer, that is associated with waterlogged and inundation-prone soils with a substantial organic content (Frood and Papas, 2016). Frood and Papas (2016, p. 126) state that the vegetation type is distinguished from Riparian Scrub (EVC 191) and Riparian Thicket (EVC 59) “by greater height and more open and diverse ferny understorey”, and from Swamp Scrub (EVC 53) “by being dominated by Scented Paperbark as well as by understorey character.” They also note that Riparian Fern Scrub is localised in the Otway Ranges, and probably also higher rainfall parts of the Gippsland Plain (Frood and Papas, 2016).

Riparian Fern Scrub was mapped across the Northern and Southern Management Units during the 2023 site visits to Walkerville Foreshore Reserve. Here, it was restricted to the lower sections of gully lines, and the break of slope, where there was sufficient ground water seepage. It was one of the more common vegetation types at the Walkerville Camping Reserve.

Within the study area, the overstorey of Riparian Fern Scrub was dominated by *Melaleuca squarrosa* (Scented Paperbark) and *Melaleuca ericifolia* (Swamp Paper-bark), with *Hedycarya angustifolia* (Austral Mulberry) and *Coprosma quadrifida* (Prickly Currant-bush) at lower frequency. Typically, there was a combination of tree ferns including *Dicksonia antarctica* (Soft Tree-fern), *Cyathea australis* (Rough Tree-fern) and *Todea barbara* (Austral King-fern). Ground ferns included *Blechnum minus* (Soft Water-fern), *Blechnum nudum* (Fishbone Water-fern), *Blechnum watsii* (Hard Water-fern), *Gleichenia microphylla* (Scrambling Coral-fern), *Histiopteris incisa* (Bat’s Wing Fern), *Hypolepis glandulifera* (Downy Ground-fern) and *Pteris tremula* (Tender Brake). Sedges and graminoids such as *Gahnia clarkei* (Tall Saw-sedge), *Tetrarrhena juncea* (Forest Wire-grass) and *Juncus pauciflorus* (Loose-flowered Rush) were also present.



**Figure 19 Riparian Fern Scrub (EVC A120), Walkerville Foreshore Reserve, October 2023**

This photograph was taken at the Walkerville Camping Reserve, within the Northern Management Unit. Vegetation had an overstorey of *Melaleuca ericifolia* (Swamp Paper-bark) with *Cyathea australis* (Rough Tree-fern) and *Hedycarya angustifolia* (Austral Mulberry).



## Riparian Thicket (EVC 59)

Riparian Thicket is a closed scrub with a component of ferns and large sedges (Frood and Papas, 2016). Frood and Papas (2016) state that the vegetation type typically occurs along swampy drainage lines with acidic soils, at altitudes intermediate between the habitats of Riparian Scrub (EVC 191) and Montane Riparian Thicket (EVC 41) (c. 450–700 m).

During the 2023 site visits, vegetation with affinities with Riparian Thicket was found to be restricted to the Southern Management Unit of Walkerville Foreshore Reserve. A small pocket of Riparian Thicket was mapped in the south-east corner of the unit, and was characterised by an overstorey of *Melaleuca squarrosa* (Scented Paperbark), and an understorey dominated by *Gleichenia microphylla* (Scrambling Coral-fern), with *Machaerina tetragona* (Square Twig-sedge) and *Gahnia sieberiana* (Red-fruit Saw-sedge) also common.

## Sand Heathland (EVC 6)



Figure 20 Sand Heathland (EVC 6), Walkerville Foreshore Reserve, October 2023

The benchmark for Sand Heathland describes a treeless heathland (or a heathland with occasional emergent mallee-form eucalypts and/or Banksias) that occurs on deep infertile sands (DSE, 2012b). The vegetation type consists of a low, dense heathy shrub layer and a number of sedges and sedge-like species (DSE, 2012b). The benchmark states that grasses and herbs are notably absent or infrequent.

Vegetation with affinities with Sand Heathland was mapped across two small pockets of the Northern Management Unit at Walkerville Foreshore Reserve in 2023; both of these occurred within the Walkerville Camping Reserve. While the mapped examples are not typical of the vegetation type, Sand Heathland was found to be the most fitting EVC assignment; the site's exposure to the prevailing winds, coupled with the deeper sands, have afforded the presence of this vegetation type.



At both locations, flora was dominated by a mix of *Xanthorrhoea australis* (Austral Grass-tree), *Leptospermum myrsinoides* (Heath Tea-tree), *Leptospermum continentale* (Prickly Tea-tree), *Monotoca scoparia* (Prickly Broom-heath), *Platylobium obtusangulum* (Common Flat-pea), *Aotus ericoides* (Common Aotus) and *Pteridium esculentum* (Austral Bracken). The area also supported the only known stands of *Hakea decurrens* subsp. *platytaenia* (Coast Needlewood) that occur within the boundary of the Foreshore Reserve; this being, despite the taxon being more common at nearby Cape Liptrap Coastal Park.

#### Tree Fern Gully



**Figure 21 A small waterfall on Tree Fern Gully, Walkerville Foreshore Reserve, October 2023**

This photograph was taken at the Walkerville Camping Reserve, within the Northern Management Unit. Vegetation was dominated by an overstorey of *Cyathea australis* (Rough Tree-fern) with a range of ground ferns such as *Lastreopsis acuminata* (Shiny Shield-fern), *Blechnum patersonii* (Strap Water-fern) and *Blechnum nudum* (Fishbone Water-fern).

During the 2023 site visits, the label 'Tree Fern Gully' was assigned to a small section of vegetation in the Northern Management Unit, and two small pockets in the Southern Unit. While this community is not formally recognised using extant EVC typology, vegetation at these locations was floristically distinct from the surrounding vegetation types. Typically, the community was associated with minor (seasonal) creeks and gully lines, did not contain Eucalypts, and had only scattered emergent trees. Generally, it occupied the upper banks and comprised of species such as *Acacia melanoxylon* (Blackwood), *Pomaderris aspera* (Hazel Pomaderris), *Hedycarya angustifolia* (Austral Mulberry), *Lomatia fraseri* (Tree Lomatia) and *Myrsine howittiana* (Muttonwood); the latter, to a lesser extent. On the more minor of the gully lines, the tree and shrub component was largely restricted to the outer margins as vegetation transitioned to the adjoining EVCs.

The community was largely dominated by a tree fern canopy of *Cyathea australis* (Rough Tree-fern) and *Dicksonia antarctica* (Soft Tree-fern), while ground ferns variously included *Lastreopsis acuminata* (Shiny Shield-fern), *Pteris tremula* (Tender Brake), *Blechnum patersonii* subsp. *patersonii* (Strap Water-fern), *Microsorium pustulatum* subsp.



*pustulatum* (Kangaroo Fern) (this species was also present as an epiphytic fern), *Blechnum minus* (Soft Water-fern), *Blechnum nudum* (Fishbone Water-fern), *Blechnum watsii* (Hard Water-fern), *Gleichenia microphylla* (Scrambling Coral-fern), *Histiopteris incisa* (Bat's Wing Fern), *Hypolepis glandulifera* (Downy Ground-fern) and *Hymenophyllum cupressiforme* (Common Filmy-fern). Vines included *Pandorea pandorana* (Wonga Vine), *Parsonsia brownii* (Twining Silkpod) and *Clematis aristata* (Mountain Clematis).

#### Warm Temperate Rainforest (syn. Littoral Rainforest) (EVC 32)



**Figure 22 Warm Temperate Rainforest (EVC 32) with *Myrsine howittiana* (Mutton-wood), Second Creek, Walkerville Foreshore Reserve, October 2023**

The photograph was taken at the base of an escarpment where there is a large stand of *Myrsine howittiana* (Mutton-wood), *Pomaderris aspera* (Hazel Pomaderris), *Cyathea australis* (Rough Tree-fern), *Polystichum proliferum* (Mother Shield-fern), and *Lastreopsis acuminata* (Shiny Shield-fern).

Warm Temperate Rainforest is a closed forest to 20 metres tall that occurs along small streams and narrow coastal fringes associated with lakes and estuaries (DSE, 2012b). As per the benchmark for the vegetation type, the EVC is dominated by a range of non-eucalypt canopy species above an understorey of smaller trees and shrubs, and is usually visually dominated by ferns and climbers (DSE, 2012b).

Warm Temperate Rainforest was mapped as occurring in the Northern and Central Management Units at Walkerville Foreshore Reserve in 2023, where it was found proximate to Second Creek and Macpherson Gully in turn. Despite being assigned to this EVC, vegetation in these areas resembled an undescribed type of littoral rainforest that was restricted to the south-east facing lower slopes, beach terraces and gully lines, and was observed to often occur in transition between other vegetation types including Riparian Fern Scrub, Coast Banksia Woodland and Tree-fern Gully.

Within the study area, vegetation that was assigned the label Warm Temperate Rainforest was dominated by a range of non-eucalypt canopy species such as *Banksia integrifolia* (Coast Banksia), *Hedycarya angustifolia* (Austral Mulberry), *Pittosporum bicolor* (Banyalla), *Pomaderris aspera* (Hazel Pomaderris) and *Acacia melanoxylon* (Blackwood), and at



Second Creek, *Myrsine howittiana* (Mutton-wood). Typically, there was also a combination of tree ferns including *Dicksonia antarctica* (Soft Tree-fern), *Cyathea australis* (Rough Tree-fern) and *Todea barbara* (Austral King-fern) present, while ground ferns variously included *Blechnum minus* (Soft Water-fern), *Blechnum nudum* (Fishbone Water-fern), *Blechnum wattsii* (Hard Water-fern), *Gleichenia microphylla* (Scrambling Coral-fern), *Histiopteris incisa* (Bat's Wing Fern), *Hypolepis glandulifera* (Downy Ground-fern) and *Pteris tremula* (Tender Brake). *Gahnia clarkei* (Tall Saw-sedge), *Tetrarrhena juncea* (Forest Wire-grass) and *Juncus pauciflorus* (Loose-flowered Rush) were also components of the flora, as were the vines *Pandorea pandorana* (Wonga Vine) and *Clematis glycinoides* (Forest Clematis).



**Figure 23 Warm Temperate Rainforest (EVC 32), Second Creek, Walkerville Foreshore Reserve, October 2023**

Vegetation had an overstorey of *Myrsine howittiana* (Mutton-wood), *Pomaderris aspera* (Hazel Pomaderris), *Banksia integrifolia* (Coast Banksia), with *Cyathea australis* (Rough Tree-fern) and *Hedycarya angustifolia* (Austral Mulberry).



A second thematic map series that depicts the broad condition of vegetation within the Foreshore Reserve is presented in Figure 24 to Figure 26 (page 31 and page 33). In addition to referencing the ecological / environmental condition of vegetation, the classes also consider the amenity value of the mapped areas (see Table 3), where an understanding of the spatial distribution of the latter will be instrumental to effectively managing the dual environmental and social / recreational values of the study area.

Of note, overall, the most intact areas in an ecological / environmental context occurred proximate to Cape Liptrap Coastal Park, where the larger and more extensive patches of remnant vegetation provide a buffer from the *edge effect* and from disturbances associated with neighbouring private properties (e.g. weed incursion and rubbish dumping). Vegetation was comparably more fragmented where it interfaced private properties, and also neighbouring (and within) the Camping Reserve. Here, vegetation has been subject to greater disturbance (including more frequent pedestrian and vehicular access and egress) and has therefore been more prone to weed invasion. In some sections, such as along Bayside Drive, other influences such as coastal erosion and the proximity of the roadside (and associated disturbances) have had a greater impact on the condition of the (now) narrow band of coastal vegetation.

**Table 3 Key to Vegetation Condition Classes, Walkerville Foreshore Reserve**

| Condition Class                               | Description  |
|---|--|
| High Quality Environmental                    | The most intact / significant vegetation within the reserve. Characteristically, these sections have a high cover of native vegetation, support a diverse assemblage of species that are typical of the constituent EVCs, and have a low cover of environmental weeds.   |
| Moderate Quality Environmental - High Amenity | Areas where vegetation structure is more degraded and where there is a lower number of species reflective of the constituent EVCs, and / or where there is an increase in the diversity and extent of high priority environmental weeds; however, where there is also high visitation by the public and where visitor amenity is important (e.g. Walkerville Camping Reserve). |
| Moderate Quality Environmental                | Areas where the vegetation structure is more degraded, and where there is a lower number of species reflective of the constituent EVCs, and / or where there is an increase in the diversity and extent of high risk environmental weeds.  |
| Low Quality Environmental - High Amenity      | Areas that are largely dominated by exotic flora and / or have a very low cover of native vegetation and / or where persisting native vegetation is highly modified / degraded; however, where there is also high visitation and where visitor amenity is important (e.g. walking tracks).   |
| Low Quality Environmental                     | Areas that are largely dominated by exotic flora and / or have a very low cover of native vegetation and / or where persisting native vegetation is highly modified / degraded.  |



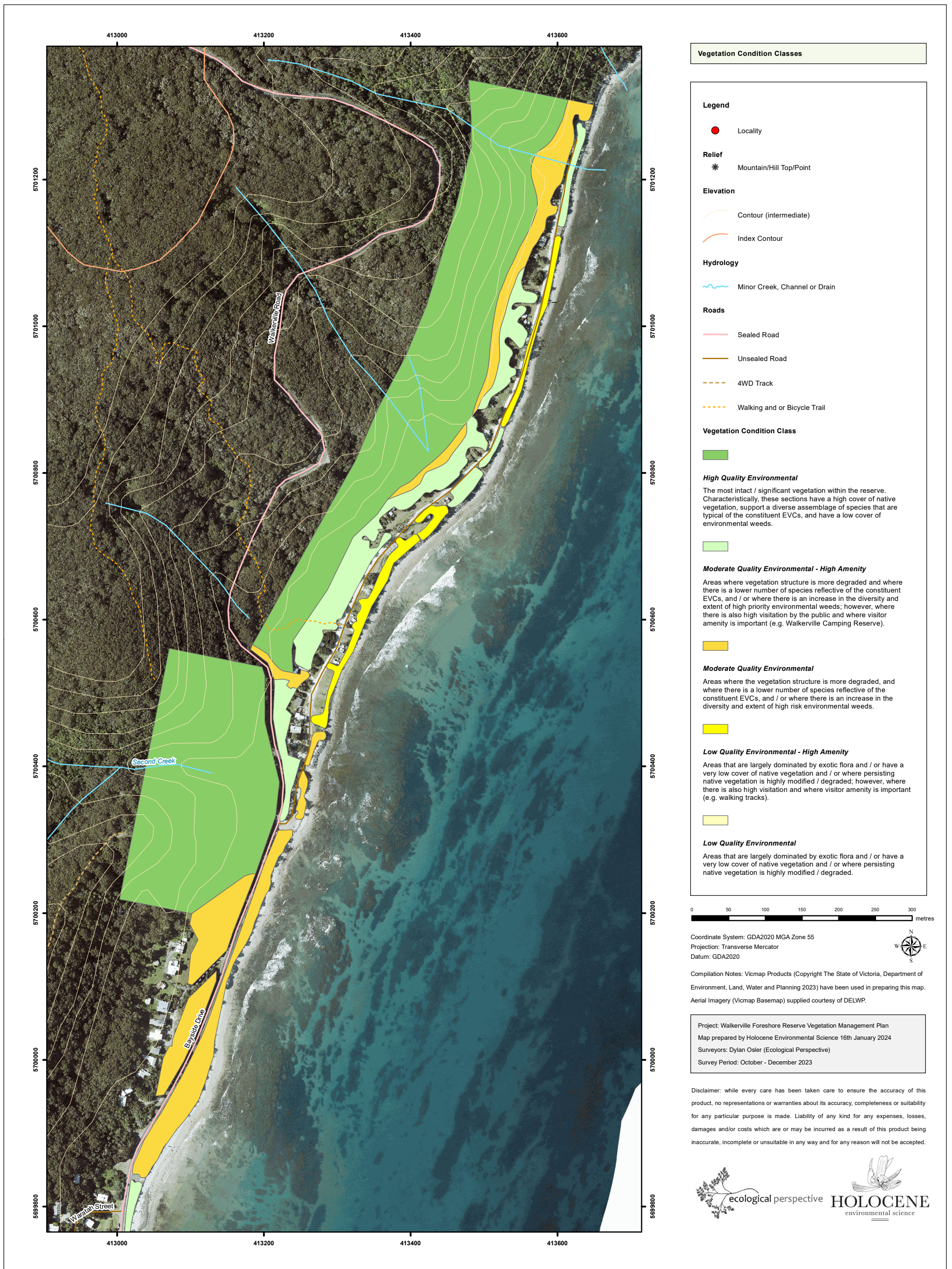


Figure 24 Condition Classes assigned to vegetation, Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023



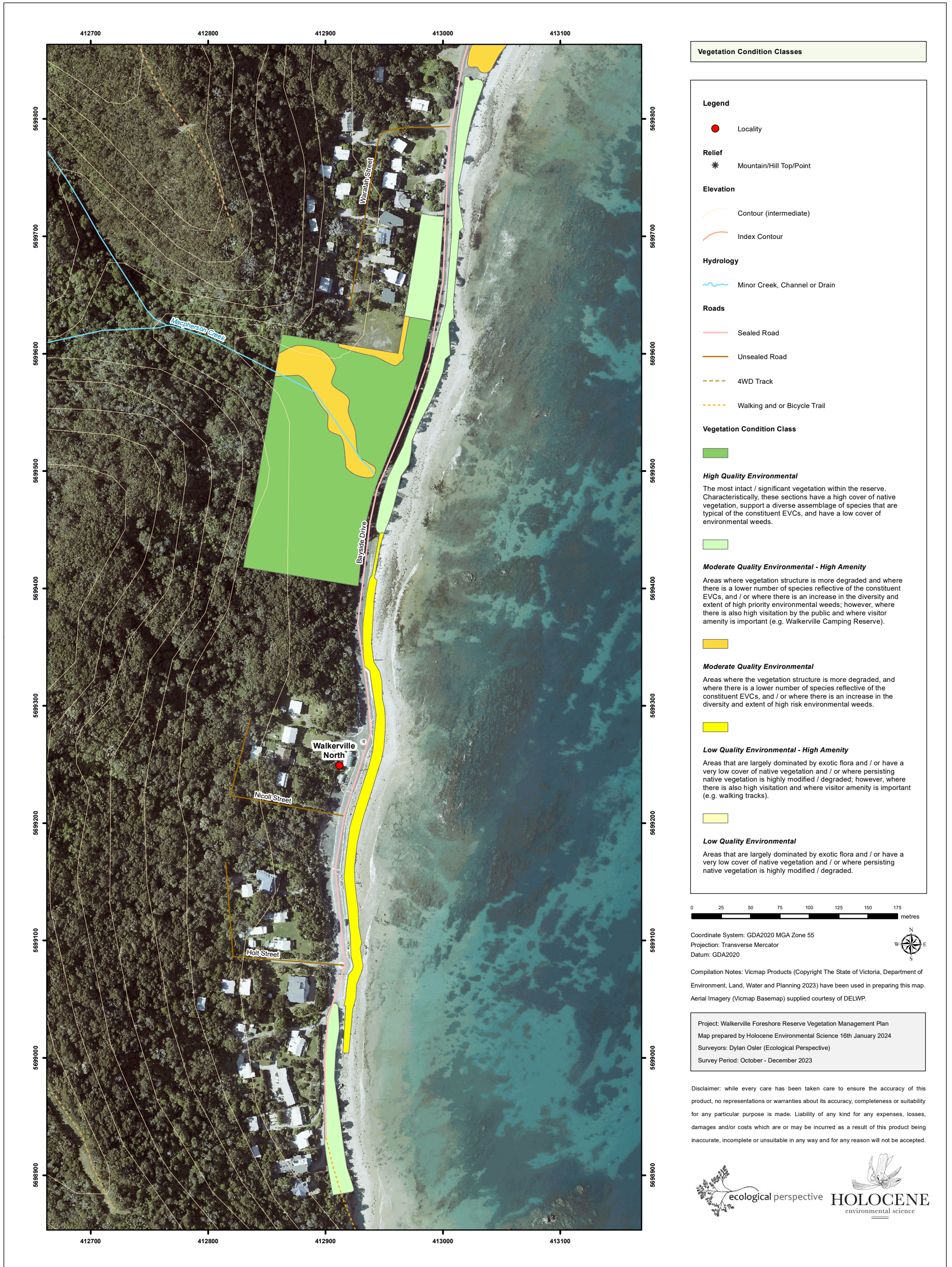


Figure 25 Condition Classes assigned to vegetation, Central Management Unit, Walkerville Foreshore Reserve, October – December 2023





Figure 26 Condition Classes assigned to vegetation, Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023



### 3.2 Flora Species

A total of 337 vascular flora species were recorded within the boundary of Walkerville Foreshore Reserve during the targeted vegetation mapping exercise completed from October – December 2023. An inventory of these flora, by management unit, is presented in Appendix 1. Of the flora, 236 species (70 %) were indigenous taxa, and 101 (30 %) were exotic taxa or naturalised species that occur beyond their natural range.

Overall, observations made during the site visits, revealed that the reserve supported intact vegetation that comprised of a high diversity of flora species, including a range of both terrestrial and riparian trees, small and medium shrubs, tree ferns, ground ferns, climbers, orchids, and herbs and graminoids, as well as a smaller array of epiphytes. Notably, the rich assemblage of species that occur within the reserve is reflective of the range *ecological niches* and *microclimates* that the area affords. Saliently, for a number of species, the study area represents the westerly extent of their *known range*; taxa in this category, for example, include the endangered FFG Act 1988 listed *Hakea decurrens* subsp. *platytaenia* (Coast Needle-wood), and the regionally significant *Banksia serrata* (Saw Banksia) (see Section 3.3 and Section 3.4 respectively).

A review of data held within the VBA revealed a dearth of historic records for the study area. That is, prior to the 2023 targeted survey, only 53 species had been formally documented as occurring within the site boundary (DELWP, 2023d; DELWP, 2023e; DELWP, 2023f). The currency of these database records spanned from 1997 to 2020, however, most were derived from surveys completed in 1997 and 2012, respectively. The 1997 records comprised of two *species lists for a defined area*; one compiled proximate to Second Creek in the Northern Management Unit, and a second near Macpherson Gully in the Central Management Unit. The 2012 records derived from a single quadrat sampled in the south-east corner of the reserve, in the Southern Management Unit.

A second VBA search revealed that the area immediately surrounding the reserve had also been subject to limited survey; with only an additional 28 unique species documented within this search distance. Aggregating records from both the database searches and the targeted survey revealed that, to date, 351 unique flora species have been recorded within the boundary of Walkerville Foreshore Reserve, and that 365 unique flora species have been recorded within 100 lineal metres of the reserve boundary (DELWP, 2023d; DELWP, 2023e; DELWP, 2023f). An inventory of these taxa is presented in Appendix 2.

### 3.3 Rare and Threatened Flora Species

The flora recorded during the October – December 2023 surveys included four taxa that are listed on the FFG Act 1988; namely, the tree *Eucalyptus kitsoniana* (Bog Gum), the shrubs *Hakea decurrens* subsp. *platytaenia* (Coastal Needlewood) and *Monotoca glauca* (Currant-wood), and the herb *Wurmbea uniflora* (One-flower Early Nancy). An inventory of these taxa, by management unit, together with notes regarding habitat and distribution is provided in Table 4 (page 35). Of the flora, *Monotoca glauca* (Currant-wood) was the most widespread, and was recorded in all three management units. Although not formally documented (i.e. referenced in the VBA), *Eucalyptus kitsoniana* (Bog Gum) and *Monotoca glauca* (Currant-wood) were known to occur at Walkerville Foreshore prior to the current study, with the other two taxa representing new records / findings. The locations of the populations recorded from October – December 2023 are depicted in Figure 27 and Figure 28 (page 36 and 37), for the Northern and Southern Management Units respectively<sup>2</sup>. The only taxon recorded in the Central Unit was *Monotoca glauca* (Currant-wood), and this taxon was not mapped due to its widespread and dispersed nature.

<sup>2</sup> Note: the maps also include populations of several regionally significant flora (see Section 3.4).



Table 4 Rare and threatened flora species recorded within the Walkerville Foreshore Reserve, October – December 2023

| Conservation Status |     | Scientific Name                                     | Common Name            | Life Form / Habitat / Distribution ^  | Management Unit |         |          |
|---------------------|-----|---|------------------------|---|-----------------|---------|----------|
| EPBC                | FFG |   |                        |   | Northern        | Central | Southern |
|                     | cr  | <i>Eucalyptus kitsoniana</i>                        | Bog Gum                | <p><i>Tree</i></p> <p>Victorian endemic. Occurring on coastal lowlands from Yarram west to Cape Otway, and Mt Richmond near Portland. It also occurs on top of Mt Oberon (Wilsons Promontory) and on nearby Snake Is.</p> <p>Widespread within Cape Liptrap Coastal Park and the surrounding district.</p>  |                 |         | yes      |
|                     | en  | <i>Hakea decurrens</i><br>subsp. <i>platytaenia</i> | Coast Needlewood       | <p><i>Medium shrub</i></p> <p>Currently recorded only from windswept coastal heaths on Wilsons Promontory and in the Mallacoota area, but possibly more widespread in similar sites.</p> <p>Recorded in Sands Heathland.</p> <p>This subspecies is also known to occur across the heathlands at Cape Liptrap Coastal Park.</p>                              | yes             |         |          |
|                     | en  | <i>Monotoca glauca</i>                              | Currant-wood           | <p><i>Medium shrub</i></p> <p>Occurs on infertile sandy soils at sea-level or on near-coastal high-rainfall ranges. Grows in open-forest, heathy woodland, wet closed scrub and margins of cool-temperate rainforest.</p> <p>Widespread through the Walkerville Foreshore Reserve and Cape Liptrap Coastal Park.</p>  | yes             | yes     | yes      |
|                     | vu  | <i>Wurmbea uniflora</i>                             | One-flower Early Nancy | <p><i>Medium herb</i></p> <p>An uncommon species, mostly from moist, heathy lowland sites (e.g. Portland, Halls Gap, Bairnsdale, Wangarabell near Genoa), with an isolated upland record from Mt Hedrick, north of Maffra.</p> <p>The species has a very patchy distribution across the site, limited to mown area within Cape Liptrap Coastal Reserve.</p> | yes             |         |          |

Conservation status is as per the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999) and Flora and Fauna Guarantee Act 1988 (FFG Act 1988) - CR: Critically Endangered; EN: Endangered; and VU: Vulnerable. Acronyms shown in upper case reference the conservation status on the EPBC Act 1999; those in lower case reference the FFG Act 1988.

^ Habitat descriptions and distribution information were sourced from VicFlora (2023) Flora of Victoria, Royal Botanic Gardens Victoria [Online] Available: <http://data.rbv.vic.gov.au/vicflora/> [accessed 5/12/2023].



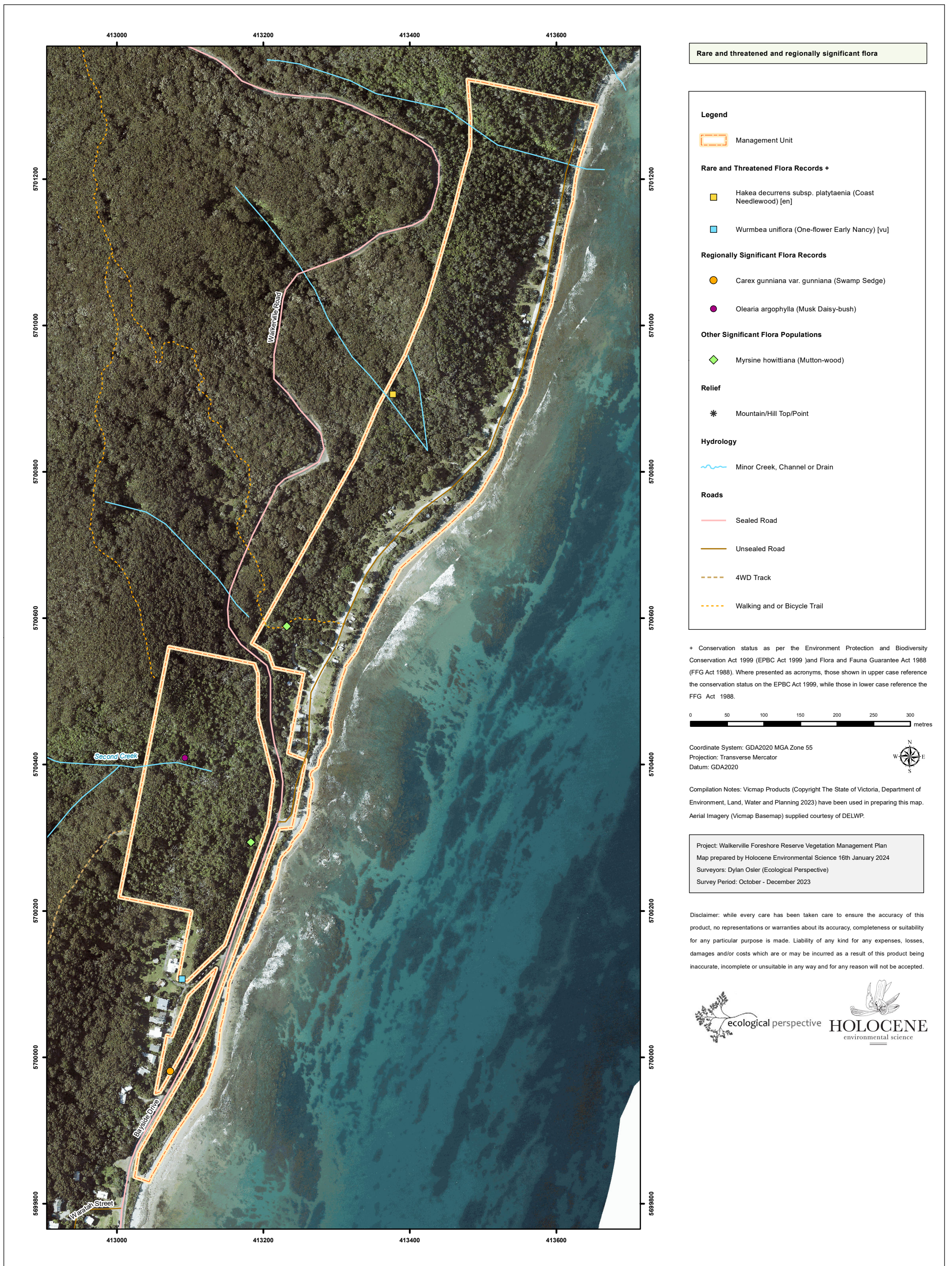


Figure 27 Rare and threatened and regionally significant flora, Northern Management Unit, Walkerville Foreshore Reserve, October - December 2023





Figure 28 Rare and threatened and regionally significant flora, Southern Management Unit, Walkerville Foreshore Reserve, October - December 2023





**Figure 29** The FFG Act 1988 listed herb *Wurmbea uniflora* (One-flower Early Nancy), Walkerville Foreshore Reserve, October 2023

A database search for rare and threatened flora recorded with a 5-kilometre radius of the study area yielded records for a total of 11 taxa. A synopsis of the currency of the database records (earliest/most recent record and count of records) is presented in Table 5 (page 39); for each taxon, reference is made to the likelihood that they may occur within the bounds of Walkerville Foreshore Reserve. The inventory also includes rare and threatened flora recorded during the current study. With respect to proximity to the study area, only one database record fell within 100 metres of the Foreshore Reserve boundary. The EPBC Act 1999 and FFG Act 1988 listed scrambler *Calystegia soldanella* (Sea Bindweed) was recorded just beyond the *area of interest* in 1984; more specifically, on the beach side at the southern end of the Walkerville Camping Reserve.



Table 5 Database records for rare and threatened flora species recorded within 5000 metres of the Walkerville Foreshore Reserve, with reference to flora recorded during the October – December 2023 surveys

| Conservation Status |     | Scientific Name                                  | Common Name            | Life Form            | Currency of Database Records within 5000 metres |             |       | Proximity of Records to Foreshore Reserve / Likelihood of Occurrence within the Reserve  |
|---------------------|-----|--|------------------------|----------------------|---|-------------|-------|--|
| EPBC                | FFG |  |                        |                      | Earliest  | Most Recent | Count |  |
|                     | en  | <i>Argentipallium dealbatum</i>                  | Silver Everlasting     | Medium herb          | 1983  | 1983        | 2     | Previously record at Cape Liptrap Coastal Park; two distinct populations known from approximately 2300 metres and 3400 metres north-east of the northern extent of the study area.<br><br>Taxon may occur within heathland vegetation within the Foreshore Reserve; however, is likely to be difficult to detect post burn conditions.               |
|                     | en  | <i>Banksia saxicola</i>                          | Rock Banksia           | Tree or large shrub  | 1973  | 1973        | 1     | Previously recorded at one location approximately 3000 metres west of the southern extent of the study area.<br><br>An unusual record that requires validation.  |
|                     | en  | <i>Burnettia cuneata</i>                         | Lizard Orchid          | Medium herb          | 1983  | 1983        | 1     | Previously recorded at one location in Cape Liptrap Coastal Park; approximately 1500 metres west of the township of Waratah Bay.<br><br>There is restricted habitat available for the taxon within the Foreshore Reserve, and it typically only flowers after fire. Likely to still occur within the Cape Liptrap Coastal Park.                      |
| EN                  | en  | <i>Caladenia orientalis</i>                      | Eastern Spider-orchid  | Medium herb          | 2007  | 2009        | 4     | Previously recorded at three locations within Cape Liptrap Coastal Park; known from the western boundary of the park approximately 2000 metres from the study area.<br><br>There is restricted habitat available for the taxon within the Foreshore Reserve; however, it is likely to still occur within the Cape Liptrap Coastal Park.              |
|                     | en  | <i>Calystegia soldanella</i>                     | Sea Bindweed           | Scrambler or climber | 1991  | 2009        | 2     | Database record within the Reserve boundary for 2009; immediately adjacent to the southern boundary of the Camping Reserve. Also recorded north-west of the study area on Fish-Creek Walkerville Road.<br><br>Very interesting record. Species likely to be impacted by coastal erosion.   |
|                     | cr  | <i>Eucalyptus kitsoniana</i>                     | Bog Gum                | Mallee tree          | 1966  | 2011        | 5     | No previous database records within the Reserve boundary, however, recorded in the Reserve during October – December 2023 surveys.<br><br>Very restricted within the study area boundary but more common in Cape Liptrap Coastal Park and surrounding areas.   |
|                     | en  | <i>Hakea decurrens</i> subsp. <i>platytaenia</i> | Coast Needlewood       | Medium shrub         | -   | -           | -     | No previous database records within 5000 metres, however, recorded in the Reserve during October – December 2023 surveys in an area mapped as supporting Sands Heathland.<br><br>Despite the absence of database records, also known from Cape Liptrap Coastal Park.   |
|                     | en  | <i>Monotoca glauca</i>                           | Currant-wood           | Medium shrub         | 1982  | 2011        | 8     | Recorded within the reserve during October – December 2023 surveys.<br><br>Previously recorded at multiple locations within Cape Liptrap Coastal Park including to the immediate west of the study area (along Walkerville Road).  |
|                     | en  | <i>Pteris epaleata</i>                           | Netted Brake           | Ground fern          | 2002  | 2002        | 1     | Previously recorded at a single location approximately 4000 metres north-west of the southern extent of the study area.<br><br>Very interesting record although species not recorded elsewhere.  |
|                     | en  | <i>Pterostylis pedoglossa</i>                    | Prawn Greenhood        | Medium herb          | 1970  | 1970        | 2     | Previously recorded at two locations in Cape Liptrap Park near Cooks Creek.  |
|                     | vu  | <i>Sowerbaea juncea</i>                          | Rush Lily              | Large herb           | 1972  | 1995        | 3     | Previously recorded along a tributary of Cooks Creek in Cape Liptrap Coastal Park approximately 1250 metres west of the township of Waratah Bay. This represents a highly disjunct occurrence for the taxon.   |
|                     | en  | <i>Tmesipteris parva</i>                         | Small Fork-fern        | Epiphyte             | 1977  | 1997        | 5     | Previously recorded at multiple locations to the north of the study area (in Cape Liptrap Coastal Park) and to the south. This represents a highly disjunct occurrence of the taxon given that it occurs so close to the coast.  |
|                     | vu  | <i>Wurmbea uniflora</i>                          | One-flower Early Nancy | Medium herb          | -   | -           | -     | No previous database records within 5000 metres of Walkerville Foreshore Reserve, however, recorded in the Reserve during October – December 2023 surveys. This represents a highly disjunct occurrence. Small population (<10 plants) in one locality. Significant range extension with the species not previously recorded within South Gippsland. |

Conservation status is as per the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999) and Flora and Fauna Guarantee Act 1988 (FFG Act 1988) - CR: Critically Endangered; EN: Endangered; and VU: Vulnerable. Acronyms shown in upper case reference the conservation status on the EPBC Act 1999; those in lower case reference the FFG Act 1988.

Data Sources: Targeted Survey (October – December 2023) and Department of Environment, Land Water and Planning (2023d) Victorian Biodiversity Atlas flora records (restricted) - VBA\_FLORA\_RESTRICTED [ESRI Geodatabase] Data Publication Date: 28th May 2023, and Department of Environment, Land Water and Planning (2023e) Victorian Biodiversity Atlas flora records (unrestricted) for sites with high spatial accuracy - VBA\_FLORA25 [ESRI Geodatabase] Data Publication Date: 28th May 2023.



### 3.4 Regionally Significant Flora Populations

Further to the listed flora recorded for the site, a number of regionally significant taxa were also observed during the October – December 2023 surveys. They include flora that are currently only known from a small number of locations within the South Gippsland region, and that have typically been observed to be in population decline. A summary of these is presented in Table 6.

While a comprehensive review of the full suite of flora known from Walkerville Foreshore Reserve was not completed as part of the current study, cursory observation suggested that noteworthy species at the site included *Banksia serrata* (Saw Banksia), *Carex gunniana* var. *gunniana* (Swamp Sedge), *Phyllangium divergens* (Wiry Mitre-wort), and *Xanthorrhoea australis* (Austral Grass-tree).

**Table 6 Regionally significant flora species recorded within the Walkerville Foreshore Reserve, October – December 2023**

| Scientific Name                                    | Common Name      | Life Form / Habitat / Distribution ^  | Management Unit |         |          |
|--|------------------|---|-----------------|---------|----------|
|  |                  |   | Northern        | Central | Southern |
| <i>Banksia serrata</i>                             | Saw Banksia      | <i>Medium shrub</i><br><br>In Victoria confined to coastal and hinterland areas east of Waratah Bay. Often locally common on sandy soils in open-forests.<br><br>The recorded population represents the westerly extent of the taxon's range.   |                 |         | yes      |
| <i>Carex gunniana</i> var. <i>gunniana</i>         | Swamp Sedge      | <i>Medium to small tufted graminoid</i><br><br>Rather uncommon, occurring mainly on swampy ground adjacent to watercourses in the lowlands of the south-west, with a single collection from <i>Eucalyptus pauciflora</i> woodland on Major Mitchell Plateau, and with a few occurrences in the eastern part of the state (e.g. Beenak, Wilsons Promontory, Nunniong Plateau etc.).<br><br>Known from only a small number of plants such as those recorded along the lower reaches of Cooks Creek. | yes             |         |          |
| <i>Olearia argophylla</i>                          | Musk Daisy-bush  | <i>Tree or large shrub</i><br><br>Widespread in gullies and wetter forests through much of the State, but surprisingly absent from the Grampians. Rare on the Volcanic Plain (e.g. at Tower Hill near Koroit)<br><br>The occurrence of this species and others such as <i>Bedfordia arborescens</i> (Blanket leaf) illustrate just how sheltered/wet that the gullies and creeklines are in the Foreshore Reserve.  | yes             |         |          |
| <i>Olearia phlogopappa</i> subsp. <i>insularis</i> | Dusty Daisy-bush | <i>Small shrub</i><br><br>Restricted to coastal heath and woodland, on and west Wilsons Promontory (Inverloch, Waratah Bay, Cape Patterson), with isolated records from the Gippsland Lakes area and Mallacoota, generally in deep sands on the leeward side of primary dunes and secondary dunes.<br><br>The taxon is relatively common where suitable habitat exists within the Foreshore Reserve.  |                 |         | yes      |



| Scientific Name                               | Common Name        | Life Form / Habitat / Distribution ^   | Management Unit |         |          |
|---|--------------------|--|-----------------|---------|----------|
|   |                    |  | Northern        | Central | Southern |
| <i>Phyllangium divergens</i>                  | Wiry Mitrewort     | <i>Small or prostrate herb</i><br>Occurs in open habitats on periodically wet sandy and clayey soils, often overlying rock.<br>A small annual species that would be readily overlooked. There is a significant range gap from the populations of Wilsons Promontory.   |                 |         | yes      |
| <i>Pomaderris oraria</i> subsp. <i>oraria</i> | Bassian Pomaderris | <i>Medium shrub</i><br>Occurs on low exposed dunes and in coastal scrub on deep siliceous sands on coasts between Cape Patterson and the Ninety Mile Beach.<br>Restricted to suitable habitat type where still present but occurs on relatively low numbers.   |                 |         | yes      |
| <i>Xanthorrhoea australis</i>                 | Austral Grass-tree | <i>Large tufted graminoid</i><br>Often abundant in sandy soils in heathlands communities or on rocky hillsides.<br>Iconic species. Some significant populations still persist within the Foreshore Reserve. Notably, the species is highly susceptible to Cinnamon Fungus ( <i>Phytophthora cinnamomi</i> ). | yes             |         | yes      |

^ Habitat descriptions and distribution information were sourced from VicFlora (2023) Flora of Victoria, Royal Botanic Gardens Victoria [Online] Available: <http://data.rbg.vic.gov.au/vicflora/> [accessed 5/12/2023].



Figure 30 *Banksia serrata* (Saw Banksia), Walkerville Foreshore Reserve, October 2023



## 4.0 OTHER VALUES

### 4.1 Fauna Habitat

Observations made during the October – December 2023 field surveys highlighted the significance of Walkerville Foreshore Reserve as faunal habitat, principally given that the site contains several distinct habitat types that range from forests to woodlands, to heathlands and scrub, to coastlines. The diversity of the available habitats, coupled with the maturity of several of the forest types, and the connectedness of the site to the surrounding landscape (e.g. Cape Liptrap Coastal Park), suggests the site has the capacity to support populations of a range of invertebrate, amphibious, fish, avian, reptilian and mammalian taxa. Notably, the significance of some of these species (as well as the site's capacity to support listed rare and threatened species) may aid in informing future management priorities at the reserve; specifically, with respect to prioritising vegetation management actions, and possibly as grounds for sourcing funding / grants.

Although a field survey was beyond the purview of the current study, a total of 96 fauna species were observed accessing / utilising the Walkerville Foreshore Reserve during the course of the 2023 vegetation mapping exercise. An inventory of the recorded taxa is presented in Appendix 3. Of the fauna, 92 species (96 %) were native taxa, and 4 (4 %) were introduced taxa.



Figure 31 Tasmanian Morepork (*Ninox novaeseelandiae leucopsis*), Cape Liptrap Coastal Reserve, October 2023



To further inform fauna utilisation of the site, a review of records held within the VBA was completed. Similar to the flora search, the fauna search garnered limited historic information pertaining to the site, with records for only 48 taxa returned (DELWP, 2023a; DELWP, 2023b; DELWP, 2023c) (see Appendix 4). The records spanned from 1999 to 2020, although a large portion derived from observations made at a single location along the northern foreshore in 2004. The remaining records generally comprised of incidental observations, with a higher concentration of sightings in the Southern Management Unit.

Extending the search parameter to encompass a distance of 100 lineal metres from the reserve boundary (i.e. to encompass the immediate surrounds of the reserve), returned records for an additional 23 unique taxa, and thus 72 species in total. Aggregating records from both the databases search and the 2023 observations revealed that, to date, 122 unique fauna species have been recorded within 100 lineal metres of the reserve boundary (DELWP, 2023a; DELWP, 2023b; DELWP, 2023c). An inventory of these taxa is presented in Appendix 4.

Overall, while some faunal groups (e.g. birds and mammals) have been subject to reasonable study with the Foreshore Reserve, as well as at the neighbouring Cape Liptrap Coastal Park, other taxon types appear to have been under-sampled. For example, despite suitable habitat at the Reserve for Burrowing Crayfish (*Engaeus* spp.), to date, there are no VBA records that confirm the presence of this genus within the study area. Likewise, there are relatively few reptile records that pertain to the Foreshore Reserve, and no records for the Swamp Skink (*Lissolepis conventryi*); the latter being despite evidence of the species occurring at Cape Liptrap Coastal Park.

Also of note, the broader area surrounding the Reserve is recognised for providing habitat to a range of species that occur beyond what is their *known range*. For example, the area supports the Superb Lyrebird (*Menura novaehollandiae*), with the resident population a significant outlier deriving from the Strzelecki Ranges where annual surveys are undertaken to garner knowledge of population size and distribution. The Morepork (*Ninox novaeseelandiae*), the Tasmanian species of the Boobook, is another example of an avian species that visits the region on a regular, in this case annual, basis; this taxon is known to congregate in the South Gippsland area around Cape Liptrap each year before returning to Tasmania. Further, although not within the immediate study area, in recent months the Turquoise Parrot (*Neophema pulchella*) has been recorded at two nearby locations, again demonstrating that the study area may serve as a *range extension* for bird species not previously known to occur in the region.

#### 4.2 Rare and Threatened Fauna Species

The fauna recorded during the October – December 2023 site visits included eight taxa that are listed on either the EPBC Act 1999 and / or the FFG Act 1988 (see Table 7). The EPBC Act 1999 listings pertained to three avian fauna; namely the Blue-winged Parrot (*Neophema chrysostoma*), Gang-gang Cockatoo (*Aythya australis*) and White-throated Needletail (*Hirundapus caudacutus*).

**Table 7 Rare and threatened fauna species recorded within the Walkerville Foreshore Reserve, October – December 2023**

| Conservation Status |     | Common Name        | Scientific Name             | Taxon Type         | Habitat on Site / Population Notes  |
|---------------------|-----|--------------------|-----------------------------|--------------------|---|
| EPBC                | FFG |                    |                             |                    |   |
| VU                  |     | Blue-winged Parrot | <i>Neophema chrysostoma</i> | Non-passerine bird | Previously recorded at multiple locations in Cape Liptrap Coastal Park; both to the north and north-west of the study area.<br><br>Although there are no database records within the site boundary, suitable habitat occurs within the Walkerville Foreshore Reserve, and the taxon is regularly sighted utilising the Reserve. |



| Conservation Status |     | Common Name               | Scientific Name                 | Taxon Type         | Habitat on Site / Population Notes   |
|---------------------|-----|---------------------------|---------------------------------|--------------------|--|
| EPBC                | FFG |                           |                                 |                    |  |
|                     | vu  | Common Sandpiper          | <i>Actitis hypoleucos</i>       | Wader              | Prefers coastal wetlands and shorelines; likely, recorded at Cooks Creek in 2023. Possible vagrant along the shoreline.  |
| EN                  |     | Gang-gang Cockatoo        | <i>Callocephalon fimbriatum</i> | Non-passerine bird | Previously recorded at multiple locations across Cape Liptrap Coastal Park.<br><br>Despite the absence of database records, suitable habitat occurs within Walkerville Foreshore Reserve and the taxon is regularly sighted.         |
|                     | en  | Lace Monitor              | <i>Varanus varius</i>           | Reptile            | Occupies various habitats; suitable habitat within the Reserve and sighted during the 2023 surveys. Various sized animals anecdotally observed in the area indicating there are multiple animals but unclear of the population size. |
|                     | vu  | Powerful Owl              | <i>Ninox strenua</i>            | Non-passerine bird | Occupies forests and woodlands. Recorded close by Casuarina Road, Walkerville South (Rob Dabal, <i>pers. comm</i> ). Population or numbers of breeding pairs across the broader area is unknown.                                     |
|                     | en  | White-bellied Sea-Eagle   | <i>Haliaeetus leucogaster</i>   | Non-passerine bird | Regularly recorded accessing the Reserve including during the 2023 surveys and known to nest close by Walkerville South area.  |
|                     | vu  | White-footed Dunnart      | <i>Sminthopsis leucopus</i>     | Mammal             | Requires forest, woodland and heathlands with a dense understorey. Was recorded in the Walkerville Foreshore Reserve in 2023. Species is possibly still widespread in the area.  |
| VU                  | vu  | White-throated Needletail | <i>Hirundapus caudacutus</i>    | Non-passerine bird | Regularly recorded accessing the airspace around the Reserve including during the 2023 surveys.  |

Note: some taxa were not recorded during the targeted vegetation mapping, however, were recorded immediately prior to.

A database search for rare and threatened fauna recorded with a 5-kilometre radius of the study area yielded records for 34 taxa. A synopsis of the currency of the database records (earliest/most recent record and count of records) is presented in Table 8 (page 45); for each taxon, reference is made to the likelihood that they may occur within the bounds of Walkerville Foreshore Reserve. The inventory also includes reference to rare and threatened fauna recorded during the current study. Notably, a number of the listed fauna are pelagic sea birds which are unlikely to use the study area as part of their habitat.

The records date from 1964 to 2021, however, a large number were collected during a 1974 bird survey to the north of the study area at Cape Liptrap Coastal Park.

With respect to proximity to the study area, database records for three taxa fell within the boundary of Walkerville Foreshore Reserve itself; namely for the Hooded Plover (*Thinornis cucullatus*), White-bellied Sea-Eagle (*Haliaeetus leucogaster*), and White-throated Needletail (*Hirundapus caudacutus*); of which the latter two were again sighted in 2023.



Table 8 Database records for rare and threatened fauna species recorded within 5000 metres of the Walkerville Foreshore Reserve, with reference to fauna recorded during the October – December 2023 surveys

| Conservation Status |     | Common Name               | Scientific Name                  | Taxon Type          | Currency of Database Records |             |       | Proximity of Records to Foreshore Reserve / Likelihood of Occurrence within the Reserve  |
|---------------------|-----|---------------------------|----------------------------------|---------------------|------------------------------|-------------|-------|--|
| EPBC                | FFG |                           |                                  |                     | Earliest                     | Most Recent | Count |  |
| EN                  | cr  | Australasian Bittern      | <i>Botaurus poiciloptilus</i>    | Non-passerine birds | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Prefers wetlands; unlikely to occur within the Foreshore Reserve due to absence of suitable habitat  |
|                     | vu  | Australasian Shoveler     | <i>Spatula rhynchotis</i>        | Non-passerine birds | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Prefers wetlands; unlikely to occur within the Foreshore Reserve due to absence of suitable habitat  |
|                     | cr  | Barking Owl               | <i>Ninox connivens</i>           | Non-passerine birds | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Prefers woodlands; suitable habitat within the Reserve, however, unlikely to occur due to population decline.  |
| VU                  |     | Black-browed Albatross    | <i>Thalassarche melanophris</i>  | Marine birds        | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Pelagic species; possibly vagrant.   |
| VU                  |     | Blue-winged Parrot        | <i>Neophema chrysostoma</i>      | Non-passerine birds | 1972                         | 2010        | 9     | Previously recorded at multiple locations in Cape Liptrap Coastal Park; both to the north and north-west of the study area.<br>Although there are no database records within the site boundary, suitable habitat occurs within the Walkerville Foreshore Reserve, and the taxon is regularly sighted utilising the Reserve.  |
|                     | vu  | Caspian Tern              | <i>Hydroprogne caspia</i>        | Waders              | 1974                         | 2010        | 3     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area. Also recorded on multiple occasions at Bears Gully (also in Cape Liptrap Coastal Park), approximately 3000 meters south of the study area<br>Occupies open water bodies; and there is suitable habitat in the area surrounding the Reserve. |
|                     | vu  | Chestnut-rumped Heathwren | <i>Calamanthus pyrrhopygius</i>  | Passerine birds     | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Suitable habitat within the Reserve; however, unlikely to occur due to population decline  |
|                     | vu  | Common Sandpiper          | <i>Actitis hypoleucos</i>        | Waders              | 1986                         | 1986        | 1     | Previously recorded at Cape Liptrap Coastal Park; approximately 300 metres from the reserve boundary, offset to the west of the southern extent of the Central Management Unit.<br>Prefers coastal wetlands and shorelines; likely, recorded at Cooks Creek in 2023.   |
| CR                  | cr  | Curlew Sandpiper          | <i>Calidris ferruginea</i>       | Waders              | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Occupies coastal wetlands and shorelines; possible vagrant.  |
| CR                  | cr  | Eastern Curlew            | <i>Numenius madagascariensis</i> | Waders              | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Occupies coastal wetlands and shorelines; possible vagrant.  |
| VU                  | cr  | Fairy Tern                | <i>Sternula nereis</i>           | Waders              | 2019                         | 2019        | 2     | Recorded on multiple occasions at Bears Gully (in Cape Liptrap Coastal Park), approximately 3000 meters south of the study area.<br>Sheltered coastal waters, sandy spits and beaches. May periodically use the area for hunting but not nesting.  |
|                     | en  | Freckled Duck             | <i>Stictonetta naevosa</i>       | Non-passerine birds | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Prefers wetlands; unlikely to occur within the Reserve due to absence of suitable habitat.   |



| Conservation Status |     | Common Name                   | Scientific Name                  | Taxon Type          | Currency of Database Records |             |       | Proximity of Records to Foreshore Reserve / Likelihood of Occurrence within the Reserve  |
|---------------------|-----|-------------------------------|----------------------------------|---------------------|------------------------------|-------------|-------|--|
| EPBC                | FFG |                               |                                  |                     | Earliest                     | Most Recent | Count |  |
| EN                  |     | Gang-gang Cockatoo            | <i>Callocephalon fimbriatum</i>  | Non-passerine birds | 1974                         | 2019        | 4     | Previously recorded at multiple locations across Cape Liptrap Coastal Park.<br>Despite the absence of database records, suitable habitat occurs within Walkerville Foreshore Reserve and the taxon is regularly sighted.   |
| VU                  | cr  | Glossy Black-Cockatoo         | <i>Calyptorhynchus lathamii</i>  | Non-passerine birds | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Occupies Black Sheoak dominated vegetation, which occurs within the Cape Liptrap Coastal Park, 2019 birds recorded on Mornington Peninsula. Possible that birds moving through may use the area.                           |
|                     | en  | Grey Goshawk                  | <i>Accipiter novaehollandiae</i> | Non-passerine birds | 2017                         | 2017        | 1     | Previously recorded on the boundary of Cape Liptrap Coastal Park, approximately 900 metres north-west of the northern extent of the study area, and south-west of the intersection of Acacia Road and Panoramic Drive.<br>Occupies a range of habitat types from open woodlands and open country. Suitable habitat within the area.  |
| VU                  | vu  | Grey-headed Flying-fox        | <i>Pteropus poliocephalus</i>    | Mammals             | 2006                         | 2006        | 1     | Previously recorded on the western boundary of Cape Liptrap Coastal Park, south of the intersection of Cottage Court and Fish-Creek Walkerville road; approximately 2200 metres north-west of the northern extent of the study area.<br>Species will opportunistically use a range of habitat types and flowering species, and is adapted to foraging fruit trees and gardens. |
|                     | en  | Ground Parrot                 | <i>Pezoporus wallicus</i>        | Non-passerine birds | 2017                         | 2017        | 1     | Previously recorded in Cape Liptrap Coastal Park, approximately 1500 metres west of the study area.<br>Occupies dense low coastal heathlands; with suitable habitat occurring within Walkerville Foreshore Reserve.  |
| VU                  | vu  | Hooded Plover                 | <i>Thinornis cucullatus</i>      | Waders              | 1974                         | 2019        | 92    | Various recorded along the coastline between Waratah Bay and Walkerville including within the boundary of Walkerville Foreshore Reserve in 2004.<br>Occupies open sand beaches; pairs known from beaches in the area.  |
| VU                  | en  | Indian Yellow-nosed Albatross | <i>Thalassarche carteri</i>      | Marine birds        | 1974                         | 1974        | 1     | Previously recorded within Cape Liptrap Coastal Park, approximately 150 metres north of the northern extent of the study area.<br>Pelagic species; possibly vagrant.   |
|                     | en  | Lace Monitor                  | <i>Varanus varius</i>            | Reptiles            | 1994                         | 2021        | 4     | Previously recorded at multiple locations within Cape Liptrap Coastal Park and the immediate surrounds, including to both the north and south of the study area.<br>Occupies various habitats; suitable habitat found within the Walkerville Foreshore Reserve, and the taxon sighted during the 2023 surveys.   |
|                     | vu  | Little Eagle                  | <i>Hieraaetus morphnoides</i>    | Non-passerine birds | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Occupies various habitats; with suitable habitat found within the Walkerville Foreshore Reserve, and the taxon likely to occur.  |
|                     | vu  | Musk Duck                     | <i>Biziura lobata</i>            | Non-passerine birds | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Prefers wetlands; unlikely to occur within the Walkerville Foreshore Reserve due to absence of suitable habitat.   |
| VU                  |     | Pilotbird                     | <i>Pycnoptilus floccosus</i>     | Passerine birds     | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Occupies forests. Suitable habitat within the Walkerville Foreshore Reserve; however, unlikely to occur due to population decline.   |
|                     | vu  | Powerful Owl                  | <i>Ninox strenua</i>             | Non-passerine birds | 1974                         | 2008        | 10    | Recorded at multiple locations within Cape Liptrap Coastal Park, including 200 metres to the immediate north-west of the northern extent of the study area.<br>Occupies forests and woodlands. Recorded close by to the Reserve (Rob Dabal, <i>pers. comm</i> ).   |



| Conservation Status |     | Common Name                | Scientific Name                     | Taxon Type          | Currency of Database Records |             |       | Proximity of Records to Foreshore Reserve / Likelihood of Occurrence within the Reserve   |
|---------------------|-----|----------------------------|-------------------------------------|---------------------|------------------------------|-------------|-------|---|
| EPBC                | FFG |                            |                                     |                     | Earliest                     | Most Recent | Count |   |
| VU                  | cr  | Sooty Albatross            | <i>Phoebastria fusca</i>            | Marine birds        | 2005                         | 2005        | 1     | Previously recorded approximately 4000 metres west of the township of Walkerville.<br>Pelagic species; possibly vagrant.  |
| EN                  | en  | Southern Giant-Petrel      | <i>Macronectes giganteus</i>        | Marine birds        | 1974                         | 1974        | 1     | Previously recorded at Cape Liptrap Coastal Park, approximately 200 metres to the immediate north-west of the northern extent of the study area.<br>Pelagic species; possibly vagrant.  |
|                     | en  | Southern Toadlet           | <i>Pseudophryne semimarmorata</i>   | Amphibians          | 1964                         | 1977        | 10    | Previously recorded at a single location in Cape Liptrap Coastal Park (approximately 2300 metres north of the northern extent of the study area), and near Buffalo – Waratah Road (4300 west of the northern extent of the study area), and approximately 3300 metres south of Walkerville South.<br>Occupies small, seasonal wetlands along drainage lines. Species has seen significant population declines in recent years. No recent records within the area, but suitable habitat still present. |
| VU                  | vu  | Swamp Antechinus           | <i>Antechinus minimus maritimus</i> | Mammals             | 1976                         | 2017        | 7     | Previously recorded at multiple locations within Cape Liptrap Coastal Park and surrounds.<br>Occupies dense heathland and heathy woodlands; with suitable habitat occurring within the Walkerville Foreshore Reserve.   |
| EN                  | en  | Swamp Skink                | <i>Lissolepis coventryi</i>         | Reptiles            | 1974                         | 2000        | 5     | Restricted database records are held for this taxon in this part of South Gippsland, however, known from two locations within 5000 metres of the study area.<br>Occupies salt marsh and dense swampy vegetation. Although there are no current database records, suitable habitat occurs within the Walkerville Foreshore Reserve.  |
|                     | en  | White-bellied Sea-Eagle    | <i>Haliaeetus leucogaster</i>       | Non-passerine birds | 1974                         | 2020        | 12    | Previously recorded at numerous locations within Cape Liptrap Coastal Park and surrounds.<br>Regularly recorded accessing the Walkerville Foreshore Reserve including during the 2023 surveys.  |
|                     | vu  | White-footed Dunnart       | <i>Sminthopsis leucopus</i>         | Mammals             | 1975                         | 2017        | 8     | Previously recorded at multiple locations within Cape Liptrap Coastal Park.<br>Requires forest, woodland and heathlands with a dense understorey. Was recorded in the Walkerville Foreshore Reserve in 2023.  |
| VU                  | vu  | White-throated Needle-tail | <i>Hirundapus caudacutus</i>        | Non-passerine birds | 1974                         | 2018        | 12    | Previously recorded at multiple locations within Cape Liptrap Coastal Park.<br>Regularly recorded accessing the Walkerville Foreshore Reserve including during the 2023 surveys.  |

Conservation status is as per the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999) and Flora and Fauna Guarantee Act 1988 (FFG Act 1988) - CR: Critically Endangered; EN: Endangered; and VU: Vulnerable. Acronyms shown in upper case reference the conservation status on the EPBC Act 1999; those in lower case reference the FFG Act 1988.

Data Sources: Incidental Observations (October – December 2023) and Department of Environment, Land Water and Planning (2023d) Victorian Biodiversity Atlas flora records (restricted) - VBA\_FLORA\_RESTRICTED [ESRI Geodatabase] Data Publication Date: 28th May 2023, and Department of Environment, Land Water and Planning (2023e) Victorian Biodiversity Atlas flora records (unrestricted) for sites with high spatial accuracy - VBA\_FLORA25 [ESRI Geodatabase] Data Publication Date: 28th May 2023.

Note: aquatic mammals such as whales have been excluded from the results as they are not relevant to the current study.



## 5.0 THREATENING PROCESSES

### 5.1 Environmental Weed Incursion

During site visits completed between October and December 2023, 52 species were designated *priority environmental weeds* in the context of the Foreshore Reserve, and population data were collected to facilitate their active management. An inventory of these species, by Management Unit, is provided in Table 9 (page 49), together with their noxious status and bioregional ranking. The spatial distribution of all recorded weed populations is depicted, by Management Unit, in Section 7.3, and population abundance is specified in the accompanying GEODATABASE.

Thirty-three of the 52 *priority weeds* are nominated as *Very High* or *High Risk* in Victoria (White *et al.*, 2022). Four taxa, *\*Asparagus scandens* (Asparagus Fern), *\*Lycium ferocissimum* (African Box-thorn), *\*Rubus anglocandicans* (Common Blackberry) and *\*Salix X fragilis* (Crack Willow), are also deemed *Weeds of National Significance* (WONS) by Weeds Australia (2023), and together with three additional taxa (namely, *\*Allium triquetrum* (Angled Onion), *\*Cynara cardunculus* subsp. *flavescens* (Artichoke Thistle) and *\*Foeniculum vulgare* (Fennel)) are listed as *regional controlled or restricted weeds* within the West Gippsland Catchment under the *Catchment and Land Protection Act 1994 (Vic)* (CaLP Act 1994) (Agriculture Victoria, 2017). *\*Rubus anglocandicans* (Common Blackberry) is also present on the FFG Act 1988 '*Potentially Threatening Processes List*,' given its ability given its ability 'to invade native vegetation' (DELWP, 2022b).

An account of weeds that occupy specific sections of the Foreshore Reserve is provided in Section 7.0, together with a summary of the taxa that are considered an immediate management priority. Notably, ongoing programs for controlling environmental weeds across the site are essential to prevent steady decline of biodiversity values, and to maintain landscape amenity and character.

The site inspections in 2023 indicated that the cover and distribution of priority weeds across the Foreshore Reserve was varied, and that priorities for control will also vary depending on the quality of vegetation they occur within, and the values each area supports. Vegetation, and exotic flora, of the reserve, however, was generally characterised by the following:

- **Large core areas of remnant vegetation**, where typical environmental weeds that have good dispersal mechanisms (i.e. are animal dispersed) such as *#Pittosporum undulatum* (Sweet Pittosporum) have been able to establish (albeit at relatively low numbers and extent), and where there are some small, localised populations of species such as *\*Cestrum elegans* (Poison Elegant-berry), *\*Plectranthus ciliatus* (African Spur-flower), *\*Ilex aquifolium* (English Holly). Note: management of these populations should be the highest priority; these taxa also represent some of the easiest species to control.
- **The encroachment of weeds from house sites**, where the increased use of horticultural species that have the potential to *naturalise*, and the *edge effect* which has been created by clearing of remnant bushland, have led to optimal conditions for the establishment and spread of a number of species. Weeds more typical of these areas included some which are slower to spread such as *\*Agapanthus praecox* (Agapanthus) and *\*Kniphofia uvaria* (Red-hot Poker), as well as more invasive species such as *\*Delairea odorata* (Cape Ivy), *\*Rubus anglocandicans* (Common Blackberry) and *\*Dipogon lignosus* (Common Dipogon).
- **Native plantings that are associated with public areas such as the Walkerville Camping Reserve and Picnic Sites.** These types of plantings include a range of species that are known to only sparingly establish outside of their *natural range*. For many of these species, their extent has been mapped, however, they are not deemed as a high priority to be controlled at this time. It is, however, possible that in time and under different climatic conditions that these species will begin to naturalise further and warrant interventive management.



Table 9 Life form and bioregional status of priority environmental weeds recorded within the Walkerville Foreshore Reserve, by Management Unit and Zone, October – December 2023

| Origin                         | Scientific Name                                    | Common Name              | Family            | Life Form                        | Bioregional Status         |                               |                                      | Management Unit and Zone |         |            |
|--------------------------------|--|--------------------------|-------------------|----------------------------------|----------------------------|-------------------------------|--------------------------------------|--------------------------|---------|------------|
|                                |  |                          |                   |                                  | CaLP Act 1994              | Weed on National Significance | Victorian Weed Advisory Risk Ranking | Northern                 | Central | Southern   |
| <b>Graminoids</b>              |  |                          |                   |                                  |                            |                               |                                      |                          |         |            |
| *                              | <i>Cortaderia selloana</i> subsp. <i>selloana</i>  | Pampas Grass             | Poaceae           | Large tufted graminoid           | -                          | -                             | High Risk                            |                          | 4       | 5          |
| *                              | <i>Crococsmia X crocosmiiflora</i>                 | Montbretia               | Iridaceae         | Medium to small tufted graminoid | -                          | -                             | Very High Risk                       | 3                        | 3       | 5          |
| <b>Herbs</b>                   |  |                          |                   |                                  |                            |                               |                                      |                          |         |            |
| *                              | <i>Agapanthus praecox</i> subsp. <i>orientalis</i> | Agapanthus               | Alliaceae         | Large herb                       | -                          | -                             | Very High Risk                       | 3                        | 2, 3    | 1, 2, 4, 6 |
| *                              | <i>Allium cepa</i>                                 | Onion                    | Alliaceae         | Large herb                       | -                          | -                             | -                                    |                          |         | 6          |
| *                              | <i>Allium triquetrum</i>                           | Angled Onion             | Alliaceae         | Medium herb                      | Restricted Weed            | -                             | High Risk                            | 4                        |         |            |
| *                              | <i>Arum italicum</i> subsp. <i>italicum</i>        | Italian Cuckoo-pint      | Araceae           | Large herb                       | -                          | -                             | Moderately High Risk                 | 3                        |         | 6          |
| *                              | <i>Chlorophytum comosum</i>                        | Spider Plant             | Hemerocallidaceae | Medium herb                      | -                          | -                             | Moderately High Risk                 | 3                        |         | 1          |
| *                              | <i>Crassula multicava</i> subsp. <i>multicava</i>  | Shade Crassula           | Crassulaceae      | Small or prostrate herb          | -                          | -                             | High Risk                            | 3                        |         |            |
| *                              | <i>Crassula muscosa</i> var. <i>muscosa</i>        | Clubmoss Crassula        | Crassulaceae      | Medium herb                      | -                          | -                             | High Risk                            |                          | 2       |            |
| *                              | <i>Cynara cardunculus</i> subsp. <i>flavescens</i> | Artichoke Thistle        | Asteraceae        | Large herb                       | Regionally Prohibited Weed | -                             | Medium Risk                          |                          |         | 1          |
| *                              | <i>Dimorphotheca pluvialis</i>                     | Cape Marigold            | Calenduleae       | Medium herb                      | -                          | -                             | Lower Risk                           | 3                        |         |            |
| *                              | <i>Foeniculum vulgare</i>                          | Fennel                   | Apiaceae          | Medium herb                      | Restricted Weed            | -                             | Very High Risk                       | 3                        |         |            |
| *                              | <i>Gazania linearis</i>                            | Gazania                  | Asteraceae        | Medium herb                      | -                          | -                             | Very High Risk                       | 4                        |         |            |
| *                              | <i>Kniphofia uvaria</i>                            | Red-hot Poker            | Asphodelaceae     | Large herb                       | -                          | -                             | High Risk                            |                          | 3       | 2          |
| *                              | <i>Plectranthus ciliatus</i>                       | African Spur-flower      | Lamiaceae         | Large herb                       | -                          | -                             | Moderately High Risk                 | 1, 4                     |         |            |
| *                              | <i>Zantedeschia aethiopica</i>                     | White Arum-lily          | Araceae           | Large herb                       | -                          | -                             | Very High Risk                       | 1                        | 1, 2    | 2, 4, 5, 6 |
| <b>Palms</b>                   |  |                          |                   |                                  |                            |                               |                                      |                          |         |            |
| *                              | <i>Cordyline australis</i>                         | New Zealand Cabbage-tree | Agavaceae         | Palm                             | -                          | -                             | High Risk                            | 4                        |         | 1, 6       |
| *                              | <i>Washingtonia</i> spp.                           | Fan Palm                 | Arecaceae         | Palm                             | -                          | -                             | -                                    | 4                        |         |            |
| <b>Scramblers and Climbers</b> |  |                          |                   |                                  |                            |                               |                                      |                          |         |            |
| *                              | <i>Asparagus scandens</i>                          | Asparagus Fern           | Asparagaceae      | Scrambler or climber             | Restricted Weed            | YES                           | Very High Risk                       | 1                        |         |            |
| *                              | <i>Delairea odorata</i>                            | Cape Ivy                 | Asteraceae        | Scrambler or climber             | -                          | -                             | Very High Risk                       | 1, 3, 4                  | 1, 3    | 1, 2, 6    |



| Origin                         | Scientific Name                                      | Common Name            | Family           | Life Form            | Bioregional Status         |                               |                                      | Management Unit and Zone |            |               |
|--------------------------------|--|------------------------|------------------|----------------------|----------------------------|-------------------------------|--------------------------------------|--------------------------|------------|---------------|
|                                |  |                        |                  |                      | CaLP Act 1994              | Weed on National Significance | Victorian Weed Advisory Risk Ranking | Northern                 | Central    | Southern      |
| *                              | <i>Dipogon lignosus</i>                              | Common Dipogon         | Fabaceae         | Scrambler or climber | -                          | -                             | Very High Risk                       | 3                        |            | 2, 3, 4, 5, 6 |
| *                              | <i>Hedera hibernica</i>                              | Atlantic Ivy           | Araliaceae       | Scrambler or climber | -                          | -                             | Very High Risk                       | 3                        | 1, 3, 5    |               |
| *                              | <i>Lonicera japonica</i>                             | Japanese Honeysuckle   | Caprifoliaceae   | Scrambler or climber | -                          | -                             | Very High Risk                       |                          |            | 4, 5          |
| *                              | <i>Passiflora edulis</i>                             | Black Passion-fruit    | Passifloraceae   | Scrambler or climber | -                          | -                             | Medium Risk                          | 1                        |            | 4, 6          |
| *                              | <i>Rubus anglocandicans</i>                          | Common Blackberry      | Rosaceae         | Scrambler or climber | Regionally Controlled Weed | YES                           | High Risk                            | 1, 2, 3                  | 1, 2, 3, 5 | 1, 2, 3, 4, 5 |
| *                              | <i>Tradescantia fluminensis</i>                      | Wandering Jew          | Commelinaceae    | Scrambler or climber | -                          | -                             | Very High Risk                       | 3                        |            |               |
| *                              | <i>Vinca major</i>                                   | Blue Periwinkle        | Apocynaceae      | Scrambler or climber | -                          | -                             | High Risk                            | 3, 4                     | 5          | 6             |
| <b>Small and Medium Shrubs</b> |  |                        |                  |                      |                            |                               |                                      |                          |            |               |
| *                              | <i>Cestrum elegans</i>                               | Elegant Poison-berry   | Solanaceae       | Medium shrub         | -                          | -                             | Very High Risk                       | 2                        |            |               |
| *                              | <i>Coprosma repens</i>                               | Mirror Bush            | Rubiaceae        | Medium shrub         | -                          | -                             | Very High Risk                       | 3                        | 3          | 1, 2, 3, 4    |
| *                              | <i>Grevillea</i> spp./cv.                            | Grevillea (cultivated) | Proteaceae       | Small shrub          | -                          | -                             | -                                    | 3                        |            |               |
| *                              | <i>Hakea drupacea</i>                                | Sweet Hakea            | Proteaceae       | Medium shrub         | -                          | -                             | High Risk                            |                          |            | 2             |
| *                              | <i>Hakea laurina</i>                                 | Pincushion Hakea       | Proteaceae       | Medium shrub         | -                          | -                             | Moderately High Risk                 |                          |            | 4             |
| *                              | <i>Hebe</i> spp.                                     | Hebe                   | Scrophulariaceae | Small shrub          | -                          | -                             | -                                    |                          | 3          |               |
| *                              | <i>Hydrangea macrophylla</i>                         | Hydrangea              | Hydrangeaceae    | Medium shrub         | -                          | -                             | Lower Risk                           | 3                        |            | 3             |
| *                              | <i>Lycium ferocissimum</i>                           | African Box-thorn      | Solanaceae       | Medium shrub         | Regionally Controlled Weed | YES                           | High Risk                            |                          |            | 1, 3, 6       |
| #                              | <i>Melaleuca armillaris</i> subsp. <i>armillaris</i> | Giant Honey-myrtle     | Myrtaceae        | Medium shrub         | -                          | -                             | Moderately High Risk                 | 3                        |            | 6             |
| *                              | <i>Physalis peruviana</i>                            | Cape Gooseberry        | Solanaceae       | Small shrub          | -                          | -                             | Moderately High Risk                 |                          |            | 1             |
| *                              | <i>Prunus cerasifera</i>                             | Cherry Plum            | Rosaceae         | Medium shrub         | -                          | -                             | High Risk                            | 4                        |            | 1             |
| <b>Trees and Large Shrubs</b>  |  |                        |                  |                      |                            |                               |                                      |                          |            |               |
| *                              | <i>Acacia elata</i>                                  | Cedar Wattle           | Mimosaceae       | Tree or large shrub  | -                          | -                             | High Risk                            |                          |            | 6             |
| #                              | <i>Acacia longifolia</i>                             | Sallow Wattle          | Mimosaceae       | Tree or large shrub  | -                          | -                             | Very High Risk                       | 4                        |            | 1, 2, 4, 6    |
| *                              | <i>Corymbia ficifolia</i>                            | Flowering Gum          | Myrtaceae        | Tree or large shrub  | -                          | -                             | -                                    | 3                        |            |               |
| *                              | <i>Eriobotrya japonica</i>                           | Loquat                 | Rosaceae         | Tree or large shrub  | -                          | -                             | Moderately High Risk                 | 4                        |            |               |
| *                              | <i>Eucalyptus botryoides</i>                         | Southern Mahogany      | Myrtaceae        | Tree or large shrub  | -                          | -                             | Moderately High Risk                 | 4                        |            |               |



| Origin | Scientific Name                | Common Name       | Family         | Life Form           | Bioregional Status |                               |                                      | Management Unit and Zone |         |                  |
|--------|--------------------------------|-------------------|----------------|---------------------|--------------------|-------------------------------|--------------------------------------|--------------------------|---------|------------------|
|        |                                |                   |                |                     | CaLP Act 1994      | Weed on National Significance | Victorian Weed Advisory Risk Ranking | Northern                 | Central | Southern         |
| *      | <i>Ficus carica</i>            | Fig               | Moraceae       | Tree or large shrub | -                  | -                             | High Risk                            | 3                        | 1       | 6                |
| *      | <i>Fraxinus spp.</i>           | Ash               | Oleaceae       | Tree or large shrub | -                  | -                             | High or Very High Risk               | 4                        |         |                  |
| *      | <i>Ilex aquifolium</i>         | English Holly     | Aquifoliaceae  | Tree or large shrub | -                  | -                             | Very High Risk                       | 3                        | 1       |                  |
| *      | <i>Melaleuca hypericifolia</i> | Hillock Bush      | Myrtaceae      | Tree or large shrub | -                  | -                             | High Risk                            |                          |         | 6                |
| *      | <i>Pinus radiata</i>           | Radiata Pine      | Pinaceae       | Tree or large shrub | -                  | -                             | Very High Risk                       |                          |         | 3                |
| #      | <i>Pittosporum undulatum</i>   | Sweet Pittosporum | Pittosporaceae | Tree or large shrub | -                  | -                             | Very High Risk                       | 1, 2, 3, 4               | 1, 2    | 1, 2, 3, 4, 5, 6 |
| *      | <i>Salix X fragilis</i>        | Crack Willow      | Salicaceae     | Tree or large shrub | Restricted Weed    | YES                           | Very High Risk                       | 3                        |         |                  |
| #      | <i>Syzygium smithii</i>        | Lilly Pilly       | Myrtaceae      | Tree or large shrub | -                  | -                             | Medium Risk                          | 3                        |         | 6                |
| *      | <i>Yucca spp.</i>              | Yucca             | Agavaceae      | Tree or large shrub | -                  | -                             | -                                    |                          |         | 4                |

Origin - an asterisk (\*) denotes species of exotic origin, and a hash (#) denotes those that are native, but where some stands may be alien.

CaLP Act 1994 – Catchment and Land Protection Act 1994

Data Sources:

White, M, Cheal, D, Carr, G W, Adair, R, Blood, K, Muir, A and Meagher, D (2022) Advisory list of environmental weeds in Victoria 2022. Arthur Rylah Institute for Environmental Research. Department of Environment, Land, Water and Planning, Heidelberg, Victoria

Agriculture Victoria (2017) Victorian Noxious Weeds List – Alphabetical by Scientific Name – current 20th July 2017 [Online] Available: [https://agriculture.vic.gov.au/\\_\\_data/assets/pdf\\_file/0003/538149/Victorian-noxious-weeds-list-by-scientific-name-20-July-2017.pdf](https://agriculture.vic.gov.au/__data/assets/pdf_file/0003/538149/Victorian-noxious-weeds-list-by-scientific-name-20-July-2017.pdf) [accessed 8/10/2022].

Weeds Australia (2023) Profiles for Weeds of National Significance [Online] Available: <https://weeds.org.au/weeds-profiles/> [accessed 5/12/2023].



Examples of the more common weed flora recorded at the Foreshore Reserve in 2023 are provided in the following photographic series (see Figure 32 to Figure 36).



Figure 32 The invasive shrub *Cestrum elegans* (Elegant Poison-berry), Second Creek, Walkerville Foreshore Reserve, November 2023



Figure 33 The invasive scrambler *Dipogon lignosus* (Common Dipogon), Walkerville Foreshore Reserve, October 2023

This photograph was taken within the Southern Management Unit. This extensive infestation will require sustained management over a prolonged period.





**Figure 34** The invasive scramblers *Dipogon lignosus* (Common Dipogon), *Lonicera japonica* (Japanese Honeysuckle) and *Rubus anglocandicans* (Common Blackberry), gully west of Walkerville Road, Walkerville Foreshore Reserve, October 2023



**Figure 35** *Delairea odorata* (Cape Ivy), Macpherson Creek, Walkerville Foreshore Reserve, October 2023

This photograph was taken within the Central Management Unit. Native ferns that dominate the area include *Polystichum proliferum* (Mother Shield-fern).





**Figure 36** \**Vinca major* (Blue Periwinkle) incursion from the carpark into native vegetation, Southern Management Unit, Walkerville Foreshore Reserve, November 2023

## 5.2 Overabundant Indigenous Flora

In Victoria, the ability for locally indigenous species at a given site to become *invasive* or *overabundant*, or to have a *negative impact* on other flora and fauna values as a consequence of alterations to ecological processes, is well documented. *Leptospermum laevigatum* (Coastal Tea-tree), for example, is prone to this behaviour across the isthmus at Wilsons Promontory, with other species such *Leptospermum continentale* (Prickly Tea-tree), *Phragmites australis* (Common Reed) and *Typha orientalis* (Broad-leaf Cumbungi), commonly considered *overabundant* across other parts of Victoria. *Pittosporum undulatum* (Sweet Pittosporum), is also known to exhibit such behaviour, with ‘*the spread of Pittosporum undulatum in areas outside its natural distribution*’, recognised as a ‘*Potentially Threatening Process*,’ under the FFG Act 1988 (DELWP, 2022b).

In a bioregional context, there has been substantial discussion relating to the pre-1750 distribution of *Pittosporum undulatum* (Sweet Pittosporum), and the extent to which it once occurred beyond the Warm Temperate Rainforest areas of the Strzelecki Ranges. Even within its *natural range*, for example, the species is known to become dominant where it occurs beyond its recognised habitat niche. In the context of Waratah Bay and the Cape Liptrap Coastal Park, and thus with respect to the Walkerville Foreshore Reserve, for example, *Pittosporum undulatum* (Sweet Pittosporum) is considered to overabundant when found outside of most sheltered gully lines (and even at times, within these areas). Where *Pittosporum undulatum* (Sweet Pittosporum) is found in EVCs such as Lowland Forest and Coastal Headland Scrub, for example, it has been identified as having the potential to become overabundant, and displace other components of the local flora, and populations in these areas are therefore considered to warrant interventive management.

*Acacia longifolia* (Sallow Wattle) also falls in this category, although assessments of its potential overabundance are more problematic as there are two subspecies that occur in Victoria; one that is local to the West Gippsland area, and



one from East Gippsland, with the latter commonly of planted in gardens. The non-local subspecies *Acacia longifolia* subsp. *longifolia* (Sallow Wattle), has been identified by VicFlora (2023) as “spreading rapidly in southern Australia, and becoming more common, possibly as a result of garden-escapes”. Comparably, the local subspecies *Acacia longifolia* subsp. *sophorae* (Coast Wattle) is thought to be largely restricted to the foredunes along the coast, although as VicFlora (2023) does acknowledge, is “possibly invading the hinterland”, and the “subsp. grades almost imperceptibly into subsp. *sophorae*”.

These dispersal patterns highlight the complexities, both with respect to resolving the taxonomy of the species, and with respect determining its potential habitat niche, and thus adopting appropriate management at a localised scale and site level. In each scenario, and in the context of the Foreshore Reserve, appropriate management needs to be based on the current ecological value of a given area, and the potential for either subspecies to shift this; where this in turn, may lead to ecological simplification of vegetation. Saliiently, when adopting this approach, there are occasions in the study area, where interventive management is warranted, and select populations of *Acacia longifolia* (Sallow Wattle) should be actively controlled.

Note, although *Leptospermum laevigatum* (Coastal Tea-tree) also has the potential to become overabundant within the study area, it has not been deemed a priority for management at this time. There are areas where the taxon forms an important component of vegetation structure, including within Coastal Dune Scrub and Coast Banksia Woodland vegetation, and the 2023 assessments suggested it has not become invasive in these scenarios.

### 5.3 Pest Animal Intrusion

During the October – December 2023 site visits, there was evidence of other processes that threaten the ecological integrity of the Foreshore Reserve, both as flora and fauna habitat. They included pest animal intrusion in the form of grazing, and predation by introduced fauna; namely, deer, foxes, rabbits, and also potentially cats. Several of these are listed as *potentially threatening* under the FFG Act 1988 (DELWP, 2022b) including: the reduction in biodiversity of native vegetation by deer, specifically Fallow Deer (*Dama dama*); predation of native wildlife by the Red Fox (*Vulpes Vulpes*); and predation of native wildlife by the Feral Cat (*Felis catus*).

Notably, fauna at risk of predation within the reserve include ground-dwelling avian taxa and nesting birds such as Hooded Plovers (*Thinornis rubricollis*), Southern Emu-wren (*Stipiturus malachurus*), ground-dwelling reptiles such as Swamp Skinks (*Lissolepis coventryi*), and forest birds including Powerful Owl (*Ninox strenua*). Often, as in the case of Powerful Owl (*Ninox strenua*), young (i.e. chicks) are more vulnerable to this type of threat.

### 5.4 Other Disturbances

During the October – December 2023 site visits, several instances of anthropogenic disturbance were also sighted within the Foreshore Reserve; for example, there was evidence of dumped garden waste at a number of locations (and in surrounding bushland), and of the encroachment of campers (both pedestrian and vehicular) into remnant vegetation was also witnessed. There were also several instances where adjoining land owners had extended management beyond the boundaries of their properties and into the Reserve itself; where the latter took the form of garden plantings (often weeds), mowing regimes, and in some instances, vegetation clearance to maintain sight lines to the ocean. There were also occasions where storm-water piping had been directed into the Reserve. In addition to altering the local character of the landscape, intrusions of this nature are often problematic in that they can promote or further weed invasion, and as they can compromise the success of management intervention within the reserve itself. They can also lead to increased nutrient loading, which will in turn alter the floristic composition of the site.



It is recommended that the Committee continue to work with neighbouring land owners to ensure that practices such as dumping garden waste cease, and similarly, with regard to the cessation of vegetation removal to maintain sight lines. It is also recommended that the Committee work with land owners to manage 'high risk' weeds that occur only the outer boundaries of the reserve. The recent construction of the stormwater pipe from a new dwelling into MacPherson Creek has the potential to become a point source for both weed invasion and erosion issues, and should also be addressed.

## 6.0 MANAGEMENT VISION AND OBJECTIVES

The overarching vision for management of the Walkerville Foreshore Reserve, and thus of this plan, is to:

Retain, protect and enhance the ecological values and functioning of the site, and to appropriately manage threatening processes that may act to degrade these, while also improving landscape amenity and promoting active and passive recreation within discrete sections of the Foreshore Reserve

The following objectives provide a broad framework for the management of vegetation (and landscape amenity) at the site. A series of management strategies have been identified for vegetation management that address these objectives.

Management objectives:

- to maintain, enhance and protect native vegetation communities and faunal habitat;
- to maintain and improve the amenity of the natural landscapes throughout the reserve;
- to protect and enhance habitat for threatened flora (and fauna species); and
- to reduce the extent and cover of high risk weeds (including those listed on the CaLP Act 1994) and eliminate these where possible.

Management strategies:

- to identify and develop strategic management zones for the management of indigenous and exotic vegetation;
- to promote natural regeneration and protect indigenous species at critical stages in their life cycles;
- to implement a revegetation and species enrichment program using site appropriate species to increase the richness and cover of indigenous species, reinstate structural components, and to increase visual amenity and landscape character;
- to monitor the survival rate of revegetation and enrichment plantings, and to undertake supplementary planting where necessary;
- to monitor the diversity and distribution of weed populations in the reserve;
- to monitor the diversity of distribution of indigenous flora that are deemed to be overabundant across the reserve
- to implement a strategic weed control program that *eradicates* (where practical) environmental weeds that threaten the ecological character and amenity of the reserve, and / or *reduces* their cover or *contains* their extent;
- to monitor for *new and emerging weeds* and abate their incursion within the reserve; and
- to employ an adaptive management approach that regularly reviews management and monitoring actions in accordance with changes in site and environmental conditions.



## 7.0 MANAGEMENT PLAN

### 7.1 Plan Structure

The plan comprises two core elements that encompass the strategies itemised in Section 6.0: the first pertains to *revegetation / natural regeneration and species enrichment*; and, the second pertains to *weed management*. A précis of each element for the Foreshore Reserve is provided in Section 7.2, with further details as they relate to each of the three management units provided in Section 7.3. Thematic weed maps that will aid in the execution of *on-ground works*, and a summary of proposed management actions for each unit is also provided in Section 7.3. Note, to facilitate *on-ground works*, each of the three management units has been further divided into a series of discrete zones, and management recommendations have been tailored to the character of each zone. For example, the zones account for the discrete assemblages of flora and fauna supported, as well as the prevalence and impact of threats at a localised scale. They also reference visitor amenity, and address means for enhancing / improving this where appropriate.

Note also, given the similar nature of on-ground remediation works, *weed management* also encompasses the management of indigenous species that are deemed ‘*out of balance*’, and taxa that fall in this category are also included in inventories of priority weed flora.

Saliently, while other threatening processes (including coastal erosion and pest animal intrusion) are referenced throughout the plan, and more specifically in the descriptions of each Management Unit (and zones within), recommendations regarding their mitigation are beyond the purview of the study. They have, nonetheless, been flagged so that appropriate investigations / actions can be considered in due course.

### 7.2 Plan Elements

#### 7.2.1 *Revegetation / Natural Regeneration and Species Enrichment Plantings*

Given that much of the Foreshore Reserve comprises of a high cover of indigenous vegetation that is principally intact, the need for intervention in the form of revegetation works is lessened. In these areas, facilitating the natural regeneration of indigenous flora through appropriate management (e.g. targeted weed control to limit competition, coupled with protection from tramping (pedestrian and vehicular)) is likely to be adequate, and will be a less expensive and more successful form of intervention over the longer-term.

Revegetation and / or enrichment plantings are, however, recommended for a selection of the more degraded parts of the Foreshore Reserve, and in some parts, will be necessary to reinstate and diversify structural components of the flora. Here, one of the core objectives of such plantings would be to link patches of remnant vegetation, and thus create more contiguous habitat for resident flora and fauna. Notably, in Walkerville North, past efforts to revegetate sections of the reserve have resulted in some increases in vegetation cover, however, are likely to benefit from supplementary planting.

A planting schedule that details proposed revegetation / enrichment plantings for the Foreshore Reserve is provided in Table 10 (page 59). The proposed works are limited to a small number of distinct areas that would benefit from this type of intervention. Examples of these include:

- Rehabilitation of the areas associated with the rock-walling at Walkerville North (Central Management Unit, Zone 4). This area is close to the Walkerville Hall, walking track, and boat ramp, and therefore has a high amenity value. Revegetation works have previously occurred in the area; however, additional planting is required to aid in the overall rehabilitation of this part of the reserve.
- Further revegetation works along the foreshore in the Northern Management Unit; specifically, Zone 3. Again, this is an area of high amenity, and is also prone to coastal erosion. Here, the successful establishment of additional plants is likely to aid in slowing further erosion.



- In the Northern Management Unit, Zone 4, strategic revegetation and facilitation of the natural recruitment of species (specifically *Melaleuca ericifolia* (Swamp Paper-bark) between camp sites (largely non-powered sites) that back onto management Zone 1. Vegetation in these areas is becoming increasingly fragmented due to the incremental encroachment of campers over time, and the natural character of the area is becoming degraded.
- The Walkerville South western gully line (Southern Management Unit, Zone 5). The canopy species in this area have become fragmented and are declining in health; likely as a result of changes to the hydrology of the area. Here, revegetation of areas where the canopy species have been lost will aid in weed suppression and improve the overall condition of vegetation.

Notably, revegetation works and enrichment plantings are only likely to succeed if properly planned, protected from grazing, and are subject to follow-up management such as weed control. Further, all planted material should be of local provenance. There is also need for varied planting styles and densities, coupled with EVC appropriate species selection. Due consideration should also be given to the underlying values of each area; for example, in some areas, large trees that obscure coastal views are likely to be inappropriate (e.g. parts of the Central Management Unit, Zone 4), while in other instances, the selection of taxa will be governed by environmental conditions. For example, suitable screening trees within the Camping Reserve will need be to tolerant of the soil and hydrological conditions. Employing bushland restoration contractors that are adept at managing natural regeneration will also be imperative.

Saliently, congruent with previous efforts, plantings along the foreshore should seek to link patches of remnant vegetation with other areas of remnant vegetation. Post-and-wire fencing should also continue to be used as a tool to delineate works area / recovering vegetation, and will likely be necessary to prevent encroachment from campers (e.g. trampling of establishing flora by pedestrians and vehicles). The fencing should be used in conjunction with tree guards, and will be fundamental to successful plant establishment in many areas, including with the Camping Reserve.

It is also recommended that the survival rate of revegetation and enrichment plantings be monitored, and supplementary planting undertaken where necessary.



Table 10 Planting schedule for revegetation of specified areas, by Management Unit and Zone, Walkerville Foreshore Reserve

| Management Unit | Zone | Location Description   | Objective / Target / Action   | Planting Density  | Species  |
|-----------------|------|--|---|---|--|
| Northern        | 4    | Walkerville Camp Ground-break of slope towards the foreshore | Revegetate to help delineate and screen areas between camp sites to help create more secluded areas   | 1 shrub/tree per 2m <sup>2</sup><br>(create a screen density)               | <p><b>Trees</b></p> <ul style="list-style-type: none"> <li>• <i>Acacia melanoxylon</i> (Blackwood)</li> <li>• <i>Banksia integrifolia</i> (Coast Banksia)</li> <li>• <i>Myrsine howittiana</i> (Mutton-wood)</li> <li>• <i>Pittosporum bicolor</i> (Banyalla)</li> <li>• <i>Pomaderris aspera</i> (Hazel Pomaderris)</li> </ul> <p><b>Medium shrubs</b></p> <ul style="list-style-type: none"> <li>• <i>Hedycarya angustifolia</i> (Austral Mulberry)</li> </ul>   |
| Northern        | 4    | Walkerville Camp Ground-foreshore areas                      | Build on existing revegetation through the area which is currently sparse making it more prone to weed invasion   | 1 shrub/tree per 1m <sup>2</sup>  | <p><b>Trees</b></p> <ul style="list-style-type: none"> <li>• <i>Allocasuarina verticillata</i> (Drooping Sheoak)</li> <li>• <i>Banksia integrifolia</i> (Coast Banksia)</li> </ul> <p><b>Medium shrubs</b></p> <ul style="list-style-type: none"> <li>• <i>Bursaria spinosa</i> var. <i>macrophylla</i> (Tree Bursaria)</li> <li>• <i>Leptospermum laevigatum</i> (Coast Tea-tree)</li> <li>• <i>Olearia phlogopappa</i> subsp. <i>insularis</i> (Dusty Daisy-bush)</li> <li>• <i>Pomaderris oraria</i> subsp. <i>oraria</i> (Bassian Pomaderris)</li> </ul>   |
| Northern        | 4    | Walkerville Camp Ground-car park areas                       | Build on existing revegetation through the area which is currently sparse making it more prone to weed invasion   | 2 shrub/tree per 2m <sup>2</sup>  | <p><b>Trees</b></p> <ul style="list-style-type: none"> <li>• <i>Allocasuarina verticillata</i> (Drooping Sheoak)</li> <li>• <i>Banksia integrifolia</i> (Coast Banksia)</li> </ul> <p><b>Medium shrubs</b></p> <ul style="list-style-type: none"> <li>• <i>Atriplex cinerea</i> (Coast Saltbush)</li> <li>• <i>Bursaria spinosa</i> var. <i>macrophylla</i> (Tree Bursaria)</li> <li>• <i>Correa alba</i> (White Correa)</li> <li>• <i>Leptospermum laevigatum</i> (Coast Tea-tree)</li> <li>• <i>Olearia phlogopappa</i> subsp. <i>insularis</i> (Dusty Daisy-bush)</li> <li>• <i>Rhagodia candolleana</i> (Sea-berry Saltbush)</li> </ul> <p><b>Graminoids</b></p> <ul style="list-style-type: none"> <li>• <i>Lepidosperma gladiatum</i> (Coast Sword-sedge)</li> <li>• <i>Poa poiformis</i> var. <i>poiformis</i> (Coast Tussock-grass)</li> <li>• <i>Pomaderris oraria</i> subsp. <i>oraria</i> (Bassian Pomaderris)</li> </ul> |
| Central         | 4    | Walkerville North-Rock Wall Beaching                         | Improve the amenity of the area by softening the interface between the rock wall and walking track. Species selection should focus on low-growing shrub species that won't impede the view lines along the coast.   | 4 plants per 1m <sup>2</sup>  | <p><b>Medium shrubs</b></p> <ul style="list-style-type: none"> <li>• <i>Adriana quadripartita</i> (Coast Bitter-bush)</li> <li>• <i>Atriplex cinerea</i> (Coast Saltbush)</li> <li>• <i>Correa alba</i> (White Correa)</li> <li>• <i>Rhagodia candolleana</i> (Sea-berry Salt-bush)</li> </ul> <p><b>Graminoids</b></p> <ul style="list-style-type: none"> <li>• <i>Austrostipa stipoides</i> (Prickly Spear-grass)</li> <li>• <i>Ficinia nodosa</i> (Knobby Club-sedge)</li> <li>• <i>Poa poiformis</i> (Coastal Tussock-grass)</li> </ul>  |
| Southern        | 5    | Gully line west of Walkerville Road                          | Changes to the hydrological flow patterns and likely nutrient enrichment has led to a decline in canopy species, specifically <i>Melaleuca squarrosa</i> (Scented Paper-bark). Infill plantings where there has been a dieback of the <i>Melaleuca squarrosa</i> (Scented Paper-bark) | 1 Swamp Paper-bark per 2m <sup>2</sup><br>1 Eucalyptus per 20m <sup>2</sup> | <p><b>Trees</b></p> <ul style="list-style-type: none"> <li>• <i>Eucalyptus kitsoniana</i> (Gippsland Bog Gum)</li> <li>• <i>Eucalyptus ovata</i> (Swamp Gum)</li> </ul> <p><b>Medium shrubs</b></p> <ul style="list-style-type: none"> <li>• <i>Melaleuca ericifolia</i> (Swamp Paper-bark)</li> </ul>   |
| Southern        | 6    | South Walkerville - Toilet Block and surrounds               | Some areas around the toilet block area require infill plantings or will when short-lived species such as <i>Solanum aviculare</i> (Kangaroo Apple) start to senesce.<br>Also encourage the natural regeneration of fern species through the area                                     | 1 shrub/tree per 5m <sup>2</sup>  | <p><b>Trees</b></p> <ul style="list-style-type: none"> <li>• <i>Acacia melanoxylon</i> (Blackwood),</li> <li>• <i>Myrsine howittiana</i> (Mutton-wood)</li> <li>• <i>Pittosporum bicolor</i> (Banyalla).</li> </ul>  |
| Southern        | -    | Regionally significant species                               | There are opportunities to increase the number of <i>Banksia serrata</i> (Saw Banksia) in the area. Very little natural recruitment was observed in the areas they occurred.  | as required   | <p><b>Medium shrubs</b></p> <ul style="list-style-type: none"> <li>• <i>Banksia serrata</i> (Saw Banksia)</li> </ul>   |

## 7.2.2 Weed Management

### Overview

It is recommended that a *strategic weed control program* that *eradicates* (where practical) environmental weeds that threaten the ecological character and amenity of the reserve, and / or *reduces* their cover or *contains* their extent, be implemented. Details of the proposed strategies for individual taxa (i.e. *eradicate*, *control* or *contain*) for each of the three management units are provided in Section 7.3, together with appropriate treatment methods.

Generally, the most efficacious and strategic control of exotic species relies on the adoption of underpinning management principles such as: (i) the control of weeds that pose the highest threat/risk first; (ii) the control of weeds within the highest quality areas of vegetation before those in lower quality areas; (iii) the control of outlying individuals before targeting the larger infestations; and (iv) early detection and intervention of new and emerging weeds. It should also consider the feasibility with which individual species can be controlled, and prioritise efforts accordingly. For example, easy to control species that pose a high risk should be prioritised over species that are difficult to control and pose a low threat to surrounding vegetation and assets. The adoption of these principles is advocated for the management of weeds across the Foreshore Reserve.

Saliently, sensitive weed control by practitioners experienced at working in remnant bushland will be instrumental to rehabilitating the site, and control techniques should be selected with consideration to localised conditions such as surrounding vegetation. It is also recommended that contractors be afforded sufficient time to walk through the site periodically to assess progress towards meeting weed management objectives, and to determine the need for re-treating invasions where appropriate. Routine monitoring should be undertaken to detect new and emerging weeds; where possible new infestations should be controlled before they reach maturity.

In summary, *survey* and *active* intervention will be necessary. The foci and treatment techniques described in the succeeding paragraphs will be variously appropriate across the Foreshore Reserve, however, should be varied in accordance with the Management Unit and Zone specifications provided in Section 7.3. Broadly, however,

- Across each of the three Management Units, works should be prioritised in areas mapped as supporting *high quality environmental* vegetation, followed by those supporting *moderate quality environmental* vegetation or *moderate quality environmental* vegetation with *high amenity*.
- Within areas mapped as supporting *high quality environmental* vegetation:
  - Weed control works should first target isolated plants in the highest quality vegetation, and then work out towards the edges of each zone, where there is a more consistent cover of weeds and / or where vegetation is more disturbed (i.e. there is a lower cover of native flora).
  - Additional efforts should be directed towards the boundaries of each core patch of remnant vegetation. In many instances, this part of the zone appears to be the point source of emerging weeds, and where routine maintenance could prevent further incursion across other parts of the zone.
  - Routine monitoring should also be undertaken to detect new and emerging weeds; where possible new infestations should be controlled before they reach maturity.



**Strategies, Treatment Frequency, and Timing**

The number of treatments required to successfully *eradicate / control* priority weed flora in the Foreshore Reserve will also vary, as will the number of consecutive years over which interventive management is required. Some taxa can be treated with only a small number of weed control runs in a given area, and can largely be treated over a short period of time, or over consecutive years (e.g. *\*Cestrum elegans* (Poison Elegant-berry), *\*Ilex aquifolium* (English Holly), *\*Plectranthus ciliatus* (African Spur-flower) and *\*Lycium ferocissimum* (African Box-thorn)). Other taxa will require a sustained approach over several years, where ideally, works will initially target vegetation in the most intact areas where there are currently, smaller infestations. Taxa in this latter category include *\*Delairea odorata* (Cape Ivy), *\*Dipogon lignosus* (Common Dipogon), *\*Lonicera japonica* (Japanese Honey-suckle), *\*Vinca major* (Blue Periwinkle) and *\*Hedera hibernica* (Atlantic Ivy). For these species, the foci of initial works should be two-fold; with management resources directed to both *controlling smaller infestations*, as well as *cutting and painting aerial stems in the larger infestations* (e.g. Southern Management Unit, Zone 5 and 6). While this approach is likely to be more resource intensive, it is also likely to result in the successful treatment of the target species, and reduce off-target damage in areas with high ecological value.

Saliently, the long-term *eradication* of *\*Delairea odorata* (Cape Ivy) from the Foreshore Reserve is likely to be difficult, and therefore it is recommended that efforts be directed to *reducing the cover* of this taxon. Notably, previous efforts to control *\*Delairea odorata* (Cape Ivy) within the boundary of the reserve have used Clopyralid-based herbicides. This herbicide is known to be residual and have a prolonged effect on soils, with research suggesting composting transfers the active ingredients. Given there are saturated soils in a number of instances where *\*Delairea odorata* (Cape Ivy) and other vines have been observed growing, coupled with the potential for large populations of *Engaeus* spp. (Burrowing Crayfish), a precautionary approach is suggested, and it is recommended that this type of herbicide no longer be used. The appropriateness of other herbicides that target broad-leaf species should also be carefully considered; i.e. to ensure that there are no known off-target impacts for indigenous fern species, and that the herbicides have limited life in the soils.

The manner in which herbicide is delivered should also vary with the age class of the target taxon, and the life form, and across the reserve. For example, the initial focus of efforts to control elevated vines should be the *cut and painting* of larger stems, as this will minimise any *over-spraying* of plants, and therefore reduce off-target damage. More generally, the over-spraying of plants should be restricted to areas where there is little groundwater seepage, and should only be undertaken once all elevated plants have been *cut and painted*. It is not recommended that over-spraying be undertaken on aerial infestations.

Management strategies and techniques will also need to be tailored in response to the size of infestations, and the current quality / condition of surrounding vegetation. As an example, in the Northern Management Unit, there is an overlap between infestations of several scramblers in Zone 4 and Zone 1, including taxa such as *Delairea odorata* (Cape Ivy) and *\*Vinca major* (Blue Periwinkle). *\*Vinca major* (Blue Periwinkle), for example, is present at low levels across the break of slope. Here, away from the seepage areas mapped as Riparian Fern Scrub this species could be over-sprayed, however, this technique should be limited in areas that were mapped as supporting Riparian Fern Scrub. Likewise, in high quality vegetation where there are only small infestations (e.g. <4m<sup>2</sup>) of scramblers such as *\*Rubus anglocandicans* (Common Blackberry), cut and paint is the preferred treatment method. In this instance, given the diversity and extent of ferns in many of the areas mapped as supporting high quality vegetation, adopting this method will likely reduce the extent of off-target damage while still treating the infestation effectively<sup>3</sup>.

<sup>3</sup> Note: not all weed control contractors are experienced with the *cut and paint* method, and this reflects the difference between employing bushland restoration contractors that are focused on *maintaining and improving* existing remnant vegetation and other contractors whose sole mandate is *weed control*.

Generally, it has been recommended that taxa including *\*Agapanthus praecox* (Agapanthus), *\*Kniphofia uvaria* (Red-hot Poker), *\*Zantedeschia aethiopica* (White Arum-lily) and other *garden escapees*, be *eradicated* from the Foreshore Reserve; that is, populations of these taxa are likely to gradually expand without interventive management. Initial efforts should, however, focus on their active control in areas that were mapped as supporting *high environmental quality* vegetation or vegetation with *high amenity*.

A different strategy should be adopted for managing overabundant native flora such as *#Pittosporum undulatum* (Sweet Pittosporum), and also *#Acacia longifolia* (Sallow Wattle). With respect to *#Pittosporum undulatum* (Sweet Pittosporum), typically, the large core areas of remnant vegetation across the Foreshore Reserve were found to have a relatively low number of plants, while there was a marked increase in the size and extent of populations in areas that were closer to development and / or housing sites; for example, the Southern Management Unit contained the largest populations. It is recommended that management efforts be initially focused on treating the smaller isolated populations, before then moving towards the larger populations. Within the larger populations, efforts should initially be directed towards controlling juvenile and female plants only, and once these populations have become 'more-or-less managed', then the removal of other mature plants should be considered.

With respect to *#Acacia longifolia* (Sallow Wattle), the extent to which the taxon is considered 'out of balance' varies across the Foreshore Reserve. For example, away from Coastal Dune Scrub, the taxon is unlikely to be considered a character species (e.g. it is not characteristic of Lowland Forest), and could therefore be managed in areas supporting this vegetation type.

**Note: all contractors should be made aware of the populations of *Myrsine howittiana* (Mutton-wood) that occur within the Foreshore Reserve. In the past, these have been misidentified as *#Pittosporum undulatum* (Sweet Pittosporum) and have been treated as a weed.** This includes both mature and juvenile stands of *Myrsine howittiana* (Mutton-wood). Bushland restoration contractors should have sufficient skill to be able to identify the difference between these species, and if it is determined that any populations are found to be treated, then the contractors' future engagement should be reviewed.

#### **Treatment Methods**

The following treatments will be variously appropriate across the Foreshore Reserve, however, again, selected should be tailored to the target taxon and the condition of vegetation in the Management Unit and Zone where the technique will be deployed.

#### **Hand-weeding**

Hand weeding refers to any removal of exotic plants undertaken by hand. This is the preferred method when controlling exotic herbs and grasses within high quality patches of groundflora due to the potential for off-target damage when using herbicide. Hand-weeding is also the preferred method for juvenile woody weeds that have yet to develop deep root systems. It is important that any exotic herbs and grasses that bear seed are removed from the site. This plan does not recommend widespread use of hand weeding, particularly of herbs and grasses, due to the priority to control larger woody weeds and climbers across the reserve. Hand weeding is more likely to be used for removal of young woody plants.

#### **Herbicide application**

Herbicide application refers to any spraying of herbicide, typically undertaken using a knapsack or boom spray. All herbicide application must be completed in accordance with standard operating procedures.



There are various methods and types of herbicides, the use of which depends on the target weed and the quality of the vegetation. These include grass-specific herbicides that do not affect surrounding non-grass species, herbicides that are suited to broad leaf weeds and others that are suitable for woody species. Due to the high potential for off-target damage when spraying herbicide, it is essential that practitioners have a high level of plant identification skills. Spraying within 2-3 metres of waterbodies, except during dry phases, is not to be undertaken due to the potential to impact water quality, frogs, burrowing crayfish and other aquatic fauna. Additionally, care should be taken to ensure that herbicide is not used in areas where there is a high diversity and cover of ferns due to the herbicides ability to impact these species.

#### **Cut-paint**

The 'cut-paint' method involves cutting woody plants at ground level and then immediately painting the stem with a systemic herbicide, usually Glyphosate. This can be undertaken throughout the year but is best implemented when the plant is actively growing, generally over the warmer months of the year. Treatment using this method may have a poor result if the plant is dormant (e.g. deciduous plants over winter) or if applied during very hot weather. This method will be required across the management period to control larger woody weeds such as *Pittosporum undulatum* (Sweet Pittosporum) and *Ilex aquifolium* (English Holly).

#### **Drill-fill**

The 'drill-fill' method is implemented by drilling a series of short holes around the base of the stem of exotic woody plants and then injecting a systemic herbicide, usually Glyphosate. This method is ideal for larger woody plants that may have thick stems/trunks that are difficult to cut through. Similar to the 'cut-paint' method, treatment using this method may have a poor result if the plant is dormant (e.g. deciduous plants over winter) or if applied during very hot weather.

#### **Windrow or Stockpile Burning**

In areas where large amounts of woody weeds have been removed/controlled, the removal of treated material and/or stockpiling for burning may be more appropriate than leaving the treated material *in-situ*. This is particularly the case for species such as *Ilex aquifolium* (English Holly), which are not only difficult to move through (if left on site), however also have the potential to re-sprout and provide cover and protection for the establishment of juvenile plants. In such circumstances, the removed material should be burnt-off.

### 7.3 Description of Management Zones and Management Recommendations

#### 7.3.1 Northern Management Unit

##### 7.3.1.1 Overview

The Northern Management Unit has been divided into four zones (see Table 11 for an overview); the spatial extent of these is depicted in Figure 37 (page 65). The delineation of zones was based on vegetation and habitat type and condition, coupled with the range of threatening processes/management issues evident at the time of survey. Consideration was also given to visitor amenity.

**Table 11 Inventory of zones, Northern Management Unit, Walkerville Foreshore Reserve**

| Management Zone | Land Form / Character   | Area                            |
|-----------------|---|---------------------------------|
| Zone 1          | <ul style="list-style-type: none"> <li>The northernmost section of the Management Unit (and the Foreshore Reserve) that lies east of Walkerville Road and is flanked by Cape Liptrap Coastal Park along the western and northern boundaries, and the Walkerville Camping Reserve to the east.</li> <li>The zone, which largely comprises of remnant vegetation, supports a range of forest and woodland types that include a number of regionally significant EVCs, and has a relatively low cover of priority weeds.</li> <li>The FFG Act 1988 listed <i>Hakea decurrens</i> subsp. <i>platytaenia</i> (Coast Needlewood) is known from the zone.</li> <li>Visitor amenities include a walking track.</li> </ul>   | 73,640 m <sup>2</sup> (7.4 Ha)  |
| Zone 2          | <ul style="list-style-type: none"> <li>A core block of vegetation that encompasses Second Creek and is flanked by Cape Liptrap Coastal Park to the north, west and south, and Walkerville Road to the east.</li> <li>The zone, which largely comprises of remnant vegetation, supports a range of forest and woodland types that include a number of regionally significant EVCs, and has a relatively low cover of priority weeds.</li> </ul>  | 55,725 m <sup>2</sup> (5.6 Ha)  |
| Zone 3          | <ul style="list-style-type: none"> <li>The southernmost section of the Management Unit that lies south of the Walkerville Camping Reserve and the north of Waratah Street. The zone encompasses two discrete blocks west of Bayside Drive that flank Zone 2 to the north-west and abut private properties to the west, and a series of segments to the east of Bayside Drive that lie between the road and the beach.</li> <li>The zone contains some intact patches of remnant vegetation, however, also comprises a high proportion of environmental weeds that will require active management over the longer term.</li> <li>The FFG Act 1988 listed <i>Wurmbea uniflora</i> (One-flower Early-Nancy) is known from the zone.</li> <li>Visitor amenities include a car park, rotunda and BBQ.</li> </ul> | 24,465 m <sup>2</sup> (2.45 Ha) |
| Zone 4          | <ul style="list-style-type: none"> <li>The zone encompasses the Walkerville Camping Reserve and its immediate surrounds.</li> <li>Visitor amenities include the Camping Reserve, access points to the beach, picnic tables, and walking tracks.</li> <li>Vegetation condition across the zone is highly varied, with a combination of highly modified sections that grade into more significant patches of remnant vegetation.</li> <li>While the zone generally has a low cover of woody weeds, there are many localised high-density infestations, and these populations require targeted control to prevent widespread establishment.</li> </ul>   | 36,170 m <sup>2</sup> (3.62 Ha) |

A detailed description of each zone, coupled with a discussion of management recommendations specific to that zone, is provided in Section 7.3.1.2 to Section 7.3.1.5. The descriptions also reference the flora and fauna supported by each zone, as well as the broad vegetation condition classes that were assigned following the site visits.

An inventory of the weeds mapped across the Northern Management Unit during the October – December site visits is provided in Section 7.3.1.6, and a summary of proposed management actions for the unit is provided in Section 7.3.1.7.



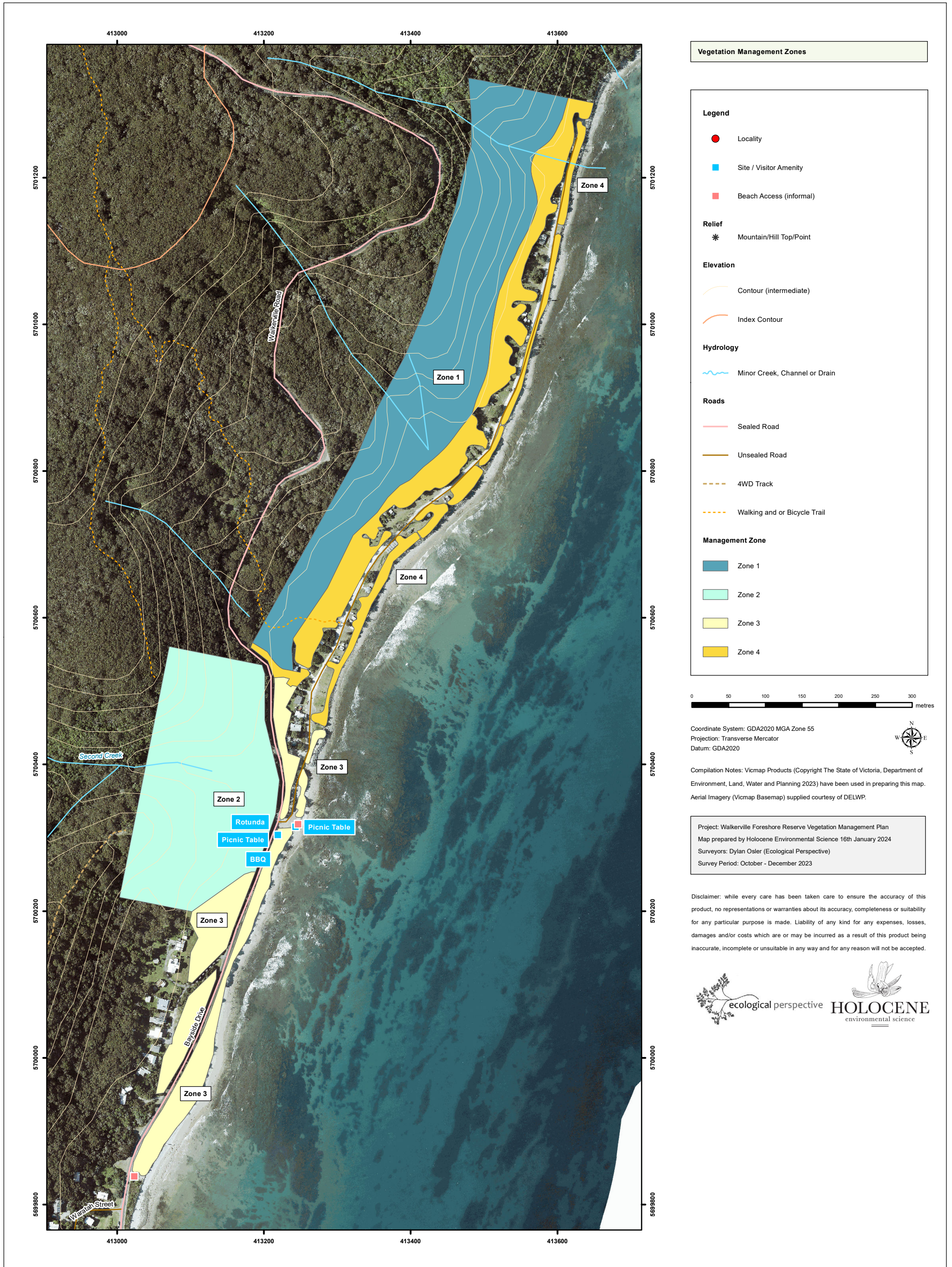


Figure 37 Vegetation Management Zones, Northern Management Unit, Walkerville Foreshore Reserve, December 2023



## 7.3.1.2 Zone 1

| Zone 1                                |  |
|---------------------------------------|--|
| <b>Site Context</b>                   |  |
| Area                                  | <ul style="list-style-type: none"> <li>73,640 m<sup>2</sup> (7.4 Ha)</li> </ul>  |
| Location / Character                  | <ul style="list-style-type: none"> <li>The northernmost section of the Management Unit (and the Foreshore Reserve) that lies east of Walkerville Road and is flanked by Cape Liptrap Coastal Park along the western and northern boundaries, and the Walkerville Camping Reserve to the east.</li> <li>The zone, which largely comprises of remnant vegetation, supports a range of forest and woodland types that include a number of regionally significant EVCs, and has a relatively low cover of priority weeds.</li> </ul>   |
| Social and Amenity Features           | <ul style="list-style-type: none"> <li>Walking Track between Camping Reserve and up into the Cape Liptrap Coastal Park</li> </ul>  |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>High Quality Environmental</li> </ul>   |
| <b>Synopsis of Values and Threats</b> |  |
| Ecological Vegetation Classes         | <ul style="list-style-type: none"> <li>Coastal Headland Scrub (Walkerville) (EVC 161)</li> <li>Coast Banksia Woodland (EVC 2)</li> <li>Damp Forest (EVC 29)</li> <li>Lowland Forest (EVC 16)</li> <li>Riparian Fern Scrub (EVC A120)</li> <li>Sand Heathland (EVC 6)</li> <li>Tree-fern Gully</li> </ul>   |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>An extensive area of intact remnant vegetation that forms part of a large contiguous habitat link with Cape Liptrap Coastal Park.</li> <li>The zone contains several small patches of EVCs that have a limited distribution across the Reserve, such as Riparian Fern Scrub and Sand Heathland.</li> </ul>  |
| Threatened and Significant Flora      | <ul style="list-style-type: none"> <li><i>Hakea decurrens</i> subsp. <i>platytaenia</i> (Coast Needlewood)</li> <li><i>Myrsine howittiana</i> (Mutton-wood)</li> <li><i>Xanthosia pilosa</i> (Woolly Xanthosia)</li> </ul>   |
| Threatened and Significant Fauna      | <ul style="list-style-type: none"> <li>Blue-winged Parrot (<i>Neophema chrysostoma</i>)</li> <li>Gang-gang Cockatoo (<i>Callocephalon fimbriatum</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> <li>White-footed Dunnart (<i>Sminthopsis leucopus</i>)</li> <li>Although not previously recorded accessing the zone, observations suggest there is suitable habitat for Powerful Owl (<i>Ninox strenua</i>) and Burrowing Crayfish (<i>Engaeus</i> spp.).</li> <li>It is also likely that this section of the Foreshore Reserve provides habitat for a number of other threatened fauna species; where these that have gone undetected due the low survey effort across the site.</li> </ul> |
| Priority Environmental Weeds          | <ul style="list-style-type: none"> <li>*<i>Asparagus scandens</i> (Asparagus Fern)</li> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Passiflora edulis</i> (Black Passion-fruit)</li> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Plectranthus ciliatus</i>. (African Spur-flower)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> <li>*<i>Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul>   |
| Pest Animals                          | <ul style="list-style-type: none"> <li>Deer, foxes and rabbits</li> </ul>  |

**Threatened and Significant Flora**

Zone 1 supports populations of the FFG Act 1988 listed endangered shrub *Hakea decurrens* subsp. *platytaenia* (Coast Needlewood), which was recorded across the small patches mapped as Sand Heathland during the October – December 2023 surveys. Other regionally significant plants including *Xanthosia pilosa* (Woolly Xanthosia) were also variously present across the zone.

**Threatened and Significant Fauna**

A range of rare and threatened fauna have been recorded more broadly across the Northern Management Unit and within the immediate surrounds of the Foreshore Reserve. The diversity of habitats provided by Zone 1 suggests that a subset of these could utilise the site, and it is probable that additional surveys would lead to the detection of a range of additional taxa. The Superb Lyrebird (*Menura novaehollandiae*), for example, was observed and heard within the area during the October – December 2023 surveys.



### Vegetation Description by Condition Class

Vegetation in Zone 1 was assigned to a single condition class; namely *High Quality Environmental*. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 1 during the October – December site visits is provided in Section 7.3.1.6. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

## High Quality Environmental

### Composition and Condition

Zone 1 comprises of a core block of remnant vegetation that supports a diversity of EVCs across a relatively small area. The zone also abuts the Cape Liptrap Coastal Park and therefore provides for the continuous passage of fauna to the north and west of the Foreshore Reserve. While all vegetation within the zone has been mapped as *high quality*, the most intact and diverse vegetation occurs across the upper slopes, with an increase in environmental pressures and weed invasion observed towards the eastern boundary of the zone where it meets Zone 4.

### Environmental Weeds

Key taxa that should be targeted for active control include *\*Asparagus scandens* (Asparagus Fern), *\*Delairea odorata* (Cape Ivy), *\*Passiflora edulis* (Black Passion-fruit), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Plectranthus ciliatus* (African Spur-flower), *\*Rubus anglocandicans* (Common Blackberry) and *\*Zantedeschia aethiopica* (White Arum-lily).

Generally, weed control works across the zone should target isolated plants in the highest quality vegetation (e.g. upslope) first, where weed incursion is principally limited to isolated plants of *#Pittosporum undulatum* (Sweet Pittosporum). The core focus of efforts in this area should be to ensure that (primarily) the extent and cover of woody weeds is reduced; where, ideally, this would mean that no mature plants set seed, and that there is no further growth of elevated climbers. Works should then extend down towards the boundary of Zone 4 and the Camping Reserve, where there is a more consistent cover of weeds and / or where vegetation is more disturbed (i.e. there is a lower cover of native flora).

Notably, many of the weeds along the lower boundary of the zone are climbers and scrambler such as *\*Delairea odorata* (Cape Ivy) that will be difficult to control and / or eradicate from the site. These infestations will require repeated treatments over the long term; however, in the interim there are preliminary approaches that can be adopted to help reduce their ongoing spread. For *\*Delairea odorata* (Cape Ivy), for example, limiting the extent of aerial growth is an important first strategy, where this should be undertaken by manually cutting back stems. Saliiently, *\*Delairea odorata* (Cape Ivy) infestations that occur in areas mapped as supporting Riparian Fern Scrub are likely to have saturated soils that potentially support the FFG Act 1988 listed Burrowing Crayfish. This means that herbicide application should be limited in these areas (e.g. no large-scale spraying, and no spraying at times when herbicide may move through the soil).

Of note, the unusual presence of *\*Plectranthus ciliatus*. (African Spur-flower), which has become an issue within Riparian Fern Scrub vegetation, is reflective of the wet conditions. Management of this species (cut and paint (removal)) should be completed in late summer at the driest times, in order to prevent excessive pugging of the soil and impacting fern growth and potential Burrowing Crayfish habitat.

## 7.3.1.3 Zone 2

| Zone 2                                |  |
|---------------------------------------|--|
| <b>Site Context</b>                   |  |
| Area                                  | <ul style="list-style-type: none"> <li>55,725 m<sup>2</sup> (5.6 Ha)</li> </ul>  |
| Location / Character                  | <ul style="list-style-type: none"> <li>A core block of vegetation that encompasses Second Creek and is flanked by Cape Liptrap Coastal Park to the north, west and south, and Walkerville Road to the east.</li> <li>The zone, which largely comprises of remnant vegetation, supports a range of forest and woodland types that include a number of regionally significant EVCs, and has a relatively low cover of priority weeds.</li> </ul>   |
| Social and Amenity Features           | <ul style="list-style-type: none"> <li>No constructed features; although, there is an informal trail from the walking track from southern hill (in Cape Liptrap Coastal Park) to the parking area at the picnic table.</li> </ul>  |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>High Quality Environmental</li> </ul>   |
| <b>Synopsis of Values and Threats</b> |  |
| Ecological Vegetation Classes         | <ul style="list-style-type: none"> <li>Coastal Headland Scrub (Walkerville) (EVC 161)</li> <li>Coast Banksia Woodland (EVC 2)</li> <li>Damp Forest (EVC 29)</li> <li>Lowland Forest (EVC 16)</li> <li>Warm temperate Rainforest (syn. Littoral Rainforest) (EVC 32)</li> </ul>   |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>A large block of intact remnant vegetation that forms part of a large contiguous habitat link with Cape Liptrap Coastal Park.</li> <li>The zone contains significant patches of Warm Temperate Rainforest which is locally uncommon; these lay adjacent to Second Creek.</li> </ul>   |
| Threatened and Significant Flora      | <ul style="list-style-type: none"> <li><i>Olearia argophylla</i> (Musk Daisy-bush)</li> <li><i>Myrsine howittiana</i> (Mutton-wood)</li> </ul>   |
| Threatened and Significant Fauna      | <ul style="list-style-type: none"> <li>Blue-winged Parrot (<i>Neophema chrysostoma</i>)</li> <li>Climbing Galaxia (<i>Galaxias brevipinnis</i>)</li> <li>Gang-gang Cockatoo (<i>Callocephalon fimbriatum</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-footed Dunnart (<i>Sminthopsis leucopus</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> <li>Although not previously recorded accessing the zone, observations suggest there is suitable habitat for Powerful Owl (<i>Ninox strenua</i>) and Burrowing Crayfish (<i>Engaeus</i> spp.).</li> <li>It is also likely that this section of the Foreshore Reserve provides habitat for a number of other threatened fauna species; where these that have gone undetected due the low survey effort across the site.</li> </ul> |
| Priority Environmental Weeds          | <ul style="list-style-type: none"> <li>*<i>Cestrum elegans</i> (Elegant Poison-berry)</li> <li>*<i>Plectranthus ciliatus</i>. (African Spur-flower)</li> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> </ul>   |
| Pest Animals                          | <ul style="list-style-type: none"> <li>Deer, foxes and rabbits</li> </ul>  |

**Threatened and Significant Flora**

Zone 2 supports a local variation of Warm Temperate Rainforest which is restricted to a small handful of creeklines within the area surrounding the Foreshore Reserve. While individual taxa within the community do not have conservation listings (e.g. the EPBC Act 1999 or FFG Act 1988), the community includes a number of species that are not typical of such low-lying areas close to the coast.

**Threatened and Significant Fauna**

A range of rare and threatened fauna have been recorded more broadly across the Northern Management Unit and within the immediate surrounds of the Foreshore Reserve. The diversity of habitats provided by Zone 2 suggests that a subset of these could utilise the site, and it is probable that additional surveys would lead to the detection of a range of additional taxa. The Superb Lyrebird (*Menura novaehollandiae*), for example, was observed and heard within the area during the October – December 2023 surveys. It is also highly likely that Climbing Galaxia (*Galaxias brevipinnis*) use Second Creek; they were observed at MacPhersons Creek (Central Management Unit Zone 1) during the 2023 surveys.



### Vegetation Description by Condition Class

Vegetation in Zone 2 was assigned to a single condition class; namely *High Quality Environmental*. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 2 during the October – December site visits is provided in Section 7.3.1.6. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

## High Quality Environmental

### Composition and Condition

Akin to Zone 1, Zone 2 comprises of a core block of remnant vegetation that supports a diversity of EVCs across a relatively small area. The zone also abuts the Cape Liptrap Coastal Park and therefore provides for the continuous passage of fauna to the north, west and south of the Foreshore Reserve. While all vegetation within the zone has been mapped as high quality, environmental pressures and weed invasion were observed to increase towards the eastern boundary of the zone where it meets Zone 3.

### Environmental Weeds

Key taxa that should be targeted for active control include *\*Cestrum elegans* (Elegant Poison-berry), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Plectranthus ciliatus* (African Spur-flower) and *\*Rubus anglocandicans* (Common Blackberry).

The core focus of efforts in this area should be to ensure that (primarily) the extent and cover of woody weeds is reduced; where, ideally, this would mean that no mature plants set seed. The isolated stand of *\*Plectranthus ciliatus* (African Spur-flower) that occurs along the lower reaches of Second Creek, and the sole *\*Cestrum elegans* (Poison Elegant-berry) patch that also occurs proximate to Second Creek are a priority for treatment and control. *\*Cestrum elegans* (Poison Elegant-berry), in particular, has the ability to disperse widely within the sheltered gully lines, and from here has the capacity to develop into a significant management issue; it should therefore be controlled where encountered. *\*Plectranthus ciliatus* (African Spur-flower) is a, comparably, slow-moving weed, however, has a high tolerance for shaded environments and has the ability to spread vegetatively along waterways. For this reason, not only should the species be treated and controlled; where possible, the cut material should also be removed from the site to prevent re-establishment and colonisation of the area.

Other weed infestations in Zone 2 were principally limited to isolated plants of *#Pittosporum undulatum* (Sweet Pittosporum), which will require targeted management to prevent the taxon from dominating any one area, and *\*Rubus anglocandicans* (Common Blackberry), which occurs at relatively low levels and predominately within sections where there is increased light such as along the margins of the roadside.

7.3.1.4 Zone 3

| Zone 3                               |  |
|--------------------------------------|--|
| Site Context                         |  |
| Area                                 | <ul style="list-style-type: none"> <li>24,465 m<sup>2</sup> (2.45 Ha)</li> </ul>   |
| Location / Character                 | <ul style="list-style-type: none"> <li>The southernmost section of the Management Unit that lies south of the Walkerville Camping Reserve and the north of Waratah Street. The zone encompasses two discrete blocks west of Bayside Drive that flank Zone 2 to the north-west and abut private properties to the west, and a series of segments to the east of Bayside Drive that lie between the road and the beach.</li> <li>The zone contains some intact patches of remnant vegetation, however, also comprises a high proportion of environmental weeds that will require active management over the longer term.</li> <li>There was evidence of encroachment from neighbouring private properties into the foreshore reserve, where this extended to active management of the reserve itself.</li> </ul>                                 |
| Social and Amenity Features          | <ul style="list-style-type: none"> <li>Car Park, Rotunda, BBQ</li> <li>Formal (stairs) and informal beach access points</li> </ul>   |
| Mapped Vegetation Condition Classes  | <ul style="list-style-type: none"> <li>Moderate Quality Environmental – High Amenity</li> <li>Moderate Quality Environmental</li> </ul>  |
| Synopsis of Values and Threats       |  |
| Ecological Vegetation Classes        | <ul style="list-style-type: none"> <li>Coastal Dune Scrub (EVC 160)</li> <li>Coast Banksia Woodland (EVC 2)</li> <li>Lowland Forest (EVC 16)</li> <li>Riparian Fern Scrub (EVC A120)</li> </ul>  |
| Vegetation Composition and Condition | <ul style="list-style-type: none"> <li>Vegetation condition within the zone is variable, with some parts retaining structural components and species diversity. The overall condition of vegetation in these areas could be maintained or improved should they be subject to ongoing targeted weed control.</li> <li>The dumping of garden waste and clearance of native vegetation within the foreshore reserve by private property owners is leading to increased weed invasion and negatively impacting the environmental values of the area.</li> <li>Significant weed issues included the large patches of <i>Hedera hibernica</i> (Atlantic Ivy) which will require a prolonged management program to be effectively controlled.</li> </ul>  |
| Threatened and Significant Flora     | <ul style="list-style-type: none"> <li><i>Wurmbea uniflora</i> (One-flower Early-Nancy)</li> <li><i>Carex gunniana subsp. gunniana</i> (Swamp Sedge)</li> </ul>  |
| Threatened and Significant Fauna     | <ul style="list-style-type: none"> <li>Blue-winged Parrot (<i>Neophema chrysostoma</i>)</li> <li>Climbing Galaxia (<i>Galaxias brevipinnis</i>)</li> <li>Gang-gang Cockatoo (<i>Callocephalon fimbriatum</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-footed Dunnart (<i>Sminthopsis leucopus</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> </ul> <p>Although not previously recorded accessing the zone, observations suggest there is suitable habitat for Powerful Owl (<i>Ninox strenua</i>) and Burrowing Crayfish (<i>Engaeus</i> spp.).</p> <p>It is also likely that this section of the Foreshore Reserve provides habitat for a number of other threatened fauna species; where these that have gone undetected due the low survey effort across the site.</p> |
| Priority Environmental Weeds         | <ul style="list-style-type: none"> <li><i>Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li><i>Chlorophytum comosum</i> (Spider Plant)</li> <li><i>Coprosma repens</i> (Mirror Bush)</li> <li><i>Crocsmia X crocosmiiflora</i> (Montbretia)</li> <li><i>Dipogon lignosus</i> (Common Dipogon)</li> <li><i>Hedera hibernica</i> (Atlantic Ivy)</li> <li><i>Hydrangea macrophylla</i> (Hydrangea)</li> <li><i>Ilex aquifolium</i> (English Holly)</li> <li><i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li><i>Rubus anglocandicans</i> (Blackberry)</li> <li><i>Salix X fragilis</i> (Crack Willow)</li> <li><i>Syzygium smithii</i> (Lily Pilly)</li> <li><i>Vinca major</i> (Blue Periwinkle)</li> </ul>   |
| Pest Animals                         | <ul style="list-style-type: none"> <li>Foxes and rabbits</li> </ul>  |



**Threatened and Significant Flora**

The FFG Act 1988 listed herb *Wurmbea uniflora* (One-flower Early Nancy) was recorded in Zone 3 during the October – December 2023 surveys. The occurrence of this species at Walkerville is a significant range extension on the known distribution of this taxon in Victoria. The species was recorded from a mown section of the Foreshore Reserve, with only a small number of plants present. A small patch of the regionally significant *Carex gunniana* subsp. *gunniana* (Swamp Sedge) was also recorded within the zone.

**Threatened and Significant Fauna**

A range of rare and threatened fauna have been recorded more broadly across the Northern Management Unit and within the immediate surrounds of the Foreshore Reserve. Akin to the other zones in the Management Unit, the diversity of habitats provided by Zone 3 suggests that a subset of these could utilise the site, and it is probable that additional surveys would lead to the detection of a range of additional taxa.

**Vegetation Description by Condition Class**

Vegetation in Zone 3 was assigned to two condition classes; namely *Moderate Quality Environmental – High Amenity* and *Moderate Quality Environmental*. A description of the composition and condition of these classes, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 3 during the October – December site visits is provided in Section 7.3.1.6. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

**Moderate Quality Environmental – High Amenity Condition Class****Composition and Condition**

A small block at the northern extent of Zone 3 has been assigned to this vegetation condition class.

**Environmental Weeds**

Key taxa that should be targeted for active control include *\*Chlorophytum comosum* (Spider Plant), *\*Hedera hibernica* (Atlantic Ivy) and *\*Vinca major* (Blue Periwinkle).

**Moderate Quality Environmental****Composition and Condition**

The majority of Zone 3 has been assigned to this vegetation condition class. These areas comprise of a series of relatively narrow blocks of remnant vegetation that have been segmented by roads, driveways and private properties making them more prone to weed invasion due to the edge effect. The gradient from the linear band of Coastal Dune Scrub (EVC 160) / Coast Banksia Woodland (EVC 2) on the eastern side of Bayside Drive through to the areas of Lowland Forest (EVC 16) / Riparian Fern Scrub (EVC A120) to the west has led to the retention of much of the localised environmental character, with vegetation structurally and floristically diverse. Reducing small localised infestations of environmental weeds from developing and mitigating further weed invasion is the main priority for these areas.

**Environmental Weeds**

Overall, Zone 3 (and areas mapped as 'Moderate Quality') has a more diverse priority weed flora than the zones to the north. While some of these will likely be effectively controlled with a single treatment, others will require repeated treatments over the longer term.

Key taxa that should be targeted for active control include *\*Agapanthus praecox* subsp. *orientalis* (Agapanthus), *\*Crocasmia X crocosmiiflora* (Montbretia), *\*Delairea odorata* (Cape Ivy), *\*Dipogon lignosus* (Common Dipogon), *\*Hydrangea macrophylla* (Hydrangea), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Rubus anglocandicans* (Common Blackberry), *#Syzygium smithii* (Lily Pilly), *\*Tradescantia fluminensis* (Wandering Jew) and *\*Vinca major* (Blue Periwinkle).

As the degree of weed invasion across the zone is varied, the most efficacious strategy is likely to involve first targeting those taxa that currently have relatively restricted distributions or those that will be more troublesome to manage should they expand further. These include:

- *\*Dipogon lignosus* (Common Dipogon), which was mapped as a single patch with the Coastal Dune Scrub and is a high priority for treatment;
- *\*Agapanthus praecox* subsp. *orientalis* (Agapanthus), which is a relatively slow-moving species but is difficult to manage once established. Given the low number of infestations extant populations are a high priority for treatment; and
- Climbers and scramblers such as *\*Delairea odorata* (Cape Ivy) and *\*Rubus anglocandicans* (Common Blackberry). These are of greatest concern within areas mapped as Riparian Fern Scrub. Given the complexity with managing these species, the susceptibility of ferns to some herbicides and the potential presence of other threatened species such as the Burrowing Crayfish any management needs to be implemented carefully. Preventing any further elevated growth of *\*Delairea odorata* (Cape Ivy) and *\*Rubus anglocandicans* (Common Blackberry) should be a high priority.

#### **Other Management Concerns / Provisions**

Effectively managing the interface between bushland areas and private properties can be challenging, and during the October – December 2023 surveys, multiple instances were sighted where vegetation within the bounds of the Foreshore Reserve (principally shrubs) had been cleared to maintain view lines to the ocean, where mowing regimes had extended beyond private properties, and where garden waste had been dumped into surrounding bushland. Some of these interventions such as mowing have been indirectly beneficial to some indigenous flora in parts; for example, the decrease in cover and competition has allowed taxa such as *Wurmbea uniflora* (One-flower Early-Nancy) and a number of other herbs and orchids to persist. If, however, mowing was to occur at non-optimal times (e.g. during the active growth phase), then this is likely to be detrimental.

With respect to ‘expectations’ regarding management of the Foreshore Reserve, it is recommended that the Committee continue to work with neighbouring land owners, particularly with regards to the cessation of rubbish dumping. This practice is leading to weed invasion and increased nutrient loading in some areas, and is undermining the local character of the site.



## 7.3.1.5 Zone 4

| Zone 4   |   |  |   |
|--|---|--|---|
| Site Context   |   |  |   |
| Area   | <ul style="list-style-type: none"> <li>36,170 m<sup>2</sup> (3.62 Ha)</li> </ul>  |  |   |
| Location / Character   | <ul style="list-style-type: none"> <li>The zone encompasses the Walkerville Camping Reserve and its immediate surrounds.</li> </ul>   |  |   |
| Social and Amenity Features  | <ul style="list-style-type: none"> <li>Walkerville Camping Reserve</li> <li>Beach Access Points</li> <li>Public Picnic Tables</li> <li>Walking Track to Cape Liptrap Coastal Park (Prom Views)</li> </ul>   |  |   |
| Mapped Vegetation Condition Classes  | <ul style="list-style-type: none"> <li>Moderate Quality Environmental – High Amenity</li> <li>Moderate Quality Environmental</li> <li>Low Quality Environmental – High Amenity</li> </ul>   |  |   |
| Synopsis of Values and Threats   |   |  |   |
| Ecological Vegetation Classes  | <ul style="list-style-type: none"> <li>Coast Banksia Woodland (EVC 2)</li> <li>Coastal Dune Scrub (EVC 160)</li> <li>Riparian Fern Scrub (EVC A120)</li> </ul>  |  |   |
| Vegetation Composition and Condition   | <ul style="list-style-type: none"> <li>Vegetation condition across the zone is highly varied, with a combination of highly modified sections that grade into more significant patches of remnant vegetation.</li> <li>The zone includes some highly intact areas just upslope of the Camping Reserve that should be protected.</li> <li>While the zone generally has a low cover of woody weeds, there are many localised high-density infestations, and these populations require targeted control to prevent widespread establishment.</li> </ul>   |  |   |
| Threatened and Significant Flora   | <ul style="list-style-type: none"> <li>None recorded</li> </ul>   |  |   |
| Threatened and Significant Fauna   | <ul style="list-style-type: none"> <li>None recorded</li> </ul>   |  |   |
| Priority Environmental Weeds   | <table border="0"> <tr> <td> <ul style="list-style-type: none"> <li>#<i>Acacia longifolia</i> (Sallow Wattle)</li> <li>*<i>Allium triquetrum</i> (Angled Onion)</li> <li>*<i>Cordyline australis</i> (New Zealand Cabbage-tree)</li> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Gazania linearis</i> (Gazania)</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Plectranthus ciliatus</i>. (African Spur-flower)</li> <li>*<i>Prunus cerasifera</i> (Cherry Plum)</li> <li>*<i>Vinca major</i> (Blue Periwinkle)</li> <li>*<i>Washingtonia</i> spp. (Fan Palm)</li> </ul> </td> </tr> </table> | <ul style="list-style-type: none"> <li>#<i>Acacia longifolia</i> (Sallow Wattle)</li> <li>*<i>Allium triquetrum</i> (Angled Onion)</li> <li>*<i>Cordyline australis</i> (New Zealand Cabbage-tree)</li> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Gazania linearis</i> (Gazania)</li> </ul> | <ul style="list-style-type: none"> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Plectranthus ciliatus</i>. (African Spur-flower)</li> <li>*<i>Prunus cerasifera</i> (Cherry Plum)</li> <li>*<i>Vinca major</i> (Blue Periwinkle)</li> <li>*<i>Washingtonia</i> spp. (Fan Palm)</li> </ul> |
| <ul style="list-style-type: none"> <li>#<i>Acacia longifolia</i> (Sallow Wattle)</li> <li>*<i>Allium triquetrum</i> (Angled Onion)</li> <li>*<i>Cordyline australis</i> (New Zealand Cabbage-tree)</li> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Gazania linearis</i> (Gazania)</li> </ul> | <ul style="list-style-type: none"> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Plectranthus ciliatus</i>. (African Spur-flower)</li> <li>*<i>Prunus cerasifera</i> (Cherry Plum)</li> <li>*<i>Vinca major</i> (Blue Periwinkle)</li> <li>*<i>Washingtonia</i> spp. (Fan Palm)</li> </ul>   |  |   |
| Pest Animals   | <ul style="list-style-type: none"> <li>Foxes and rabbits</li> </ul>   |  |   |

Note: specific management relating to the operations of the Walkerville Camping Reserve such as mowing regimes, spraying around infrastructure including toilet blocks and car parks, and camp site layout, are not addressed here. The management objectives provided for Zone 4 are limited to improving/maintaining the landscape amenity, with attention also directed to improving the public amenity within this area. There are areas within the zone where long-term management intervention is required and revegetation is necessary ensure that the values of the Camping Reserve are maintained.

**Vegetation Description by Condition Class**

Vegetation in Zone 4 was assigned to three condition classes; namely *Moderate Quality Environmental – High Amenity*, *Moderate Quality Environmental* and *Low Quality Environmental – High Amenity*. A description of the composition and condition of these vegetation types, together with a summary of key weed flora and management priorities is provided below. An inventory of all the weeds mapped across Zone 4 during the October – December site visits is provided in Section 7.3.1.6. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

**Moderate Quality Environmental – High Amenity Condition Class****Composition and Condition**

The majority of Zone 4 has been assigned to this vegetation condition class which encompasses most of the areas associated with the Walkerville Camping Reserve. Given the mixed-use nature of the space, the objective of management works in this area should be to enhance *visual amenity* and natural *landscape values*, with this outcome best achieved by maintaining local character through actively protecting and managing remnant patches of vegetation, and by improving the camping experience through creating a sense of *private camping spaces* using strategic revegetation.

As at December 2023, much of the class supported vegetation that had been historically cleared yet has been left to naturally regenerate, and now supports a reasonable cover of native vegetation; however, generally lacks species diversity, and has a high cover of woody weeds and other taxa that are difficult to control. Throughout the Camping Reserve, there are also a number of restoration areas that have been delineated with post and wire fences, including along the foreshore.

**Environmental Weeds**

Vegetation in this condition class includes a range of non-indigenous and exotic species, however, the focus of weed control efforts should be on those species that will adversely affect local character over time, as well as those that have the capacity spread more widely into the surrounding remnant areas of vegetation. Key taxa that should be targeted for active control include #*Acacia longifolia* (Sallow Wattle), \**Delairea odorata* (Cape Ivy), #*Pittosporum undulatum* (Sweet Pittosporum), \**Plectranthus ciliatus* (African Spur-flower), \**Prunus cerasifera* (Cherry Plum) and \**Vinca major* (Blue Periwinkle). Generally, grass and herb weeds pose a reduced risk when compared to the larger infestations of species such as \**Delairea odorata* (Cape Ivy). In some sections, for example, there are extensive sections of elevated growth of this taxon through the *Banksia integrifolia* (Coast Banksia).

For \**Delairea odorata* (Cape Ivy), limiting the extent of aerial growth is an important first strategy, where this should be undertaken by manually cutting back stems. Saliiently, \**Delairea odorata* (Cape Ivy) infestations that occur in areas mapped as supporting Riparian Fern Scrub are likely to have saturated soils that potentially support the FFG Act 1988 listed Burrowing Crayfish. This means that herbicide application should be limited in these areas (e.g. no large-scale spraying, and no spraying at times when herbicide may move through the soil).

Overall, weed control efforts across the Northern Management Unit should initially be directed towards managing areas mapped as supporting *High Quality Vegetation*, before moving into areas supporting *Moderate Quality Vegetation*. Within the *Moderate Quality Condition Class*, there should be an emphasis on consolidating the larger, core blocks of native vegetation rather than targeting the smaller areas at the ends of some of the peninsulas. Should the zone be subject to future fuel reduction burns, then significant resources should be allocated to targeted weed control in the 1-2 years following the burn operation. This vegetation type, coupled with the composition of exotic species in the surrounding area, suggest there would be substantial post-fire recruitment.

**Revegetation / Natural Regeneration / Species Enrichment Plantings**

Given this part of the zone is subject to high visitation, it is likely that the small coppice of *Melaleuca ericifolia* (Swamp Paper-bark) will incrementally decrease in size thus creating a more open site and losing the natural character of the area. Adopting a balance between more *open powered-sites* for caravans and sites for campers looking for a more *secluded spot* may be beneficial. Other appropriate actions to facilitate natural regeneration will include limiting encroachment by campers by delineating some of the camp sites with post and wire fencing; which has aided the process elsewhere in the Camping Reserve.



Towards the back of the sites, enrichment plantings using taxa such as *Myrsine howittiana* (Mutton-wood), *Pittosporum bicolor* (Banyalla), *Acacia melanoxydon* (Blackwood) and *Hedycarya angustifolia* (Austral Mulberry), would also be appropriate. These species are tolerant of wetter and shaded positions, will provide a dense screen between the camp sites, and have suitable form to be grown near the sites. Nearer the foreshore, enrichment with species such as (but not restricted too) *Banksia integrifolia* (Coast Banksia), *Allocasuarina verticillata* (Drooping Sheoak), *Leptospermum laevigatum* (Coast Tea-tree), *Pomaderris oraria* subsp. *oraria* (Bassian Pomaderris), *Olearia phlogopappa* subsp. *insularis* (Dusty Daisy-bush), and *Bursaria spinosa* var. *macrophylla* (Tree Bursaria), planted in dense blocks, would help to break the easterly winds into the more exposed sites.

### Moderate Quality Environmental

#### Composition and Condition

This condition class corresponds with the interface between the Camping Reserve and the core areas of remnant vegetation further upslope in Zone 1. Although highly modified, these areas have been mapped as supporting a combination of Riparian Fern Scrub (EVC A120) and Coast Banksia Woodland (EVC 2). The core focus of efforts in this condition class should be to ensure that (primarily) the extent and cover of woody weeds is reduced; where, ideally, this would mean that no mature plants set seed, and that there is no further growth of elevated climbers. Additionally, efforts should be directed towards aiding natural regeneration, where effective strategies may include the erection of post-and-wire fencing to delineate camp sites and prevent incremental encroachment (vehicular and foot traffic) into these areas.

#### Environmental Weeds

Key taxa that should be targeted for active control include *\*Allium triquetrum* (Angled Onion), *\*Cordyline australis* (New Zealand Cabbage-tree), *\*Delairea odorata* (Cape Ivy), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Plectranthus ciliatus* (African Spur-flower), *\*Prunus cerasifera* (Cherry Plum) and *\*Vinca major* (Blue Periwinkle). Overall, there is a higher concentration of weeds in the immediate vicinity above the camp sites, however, weed cover steadily decreases as the cover of more stable remnant vegetation increases.

Generally, weed control works across this part of the zone should target isolated plants in the highest quality vegetation, and then work out towards the edges where there is a more consistent cover of weeds and / or where vegetation is more disturbed (i.e. there is a lower cover of native flora); this will likely involve working from the upper slopes towards the camp sites. Scramblers such as *\*Delairea odorata* (Cape Ivy) and *\*Vinca major* (Blue Periwinkle) will be difficult to control and / or eradicate from the site. These infestations will require repeated treatments over the long term; however, in the interim there are preliminary approaches that can be adopted to help reduce their ongoing spread. For *\*Delairea odorata* (Cape Ivy), for example, limiting the extent of aerial growth is an important first strategy, where this should be undertaken by manually cutting back stems. Saliiently, *\*Delairea odorata* (Cape Ivy) infestations that occur in areas mapped as supporting Riparian Fern Scrub are likely to have saturated soils that potentially support the FFG Act 1988 listed Burrowing Crayfish. This means that herbicide application should be limited in these areas (e.g. no large-scale spraying, and no spraying at times when herbicide may move through the soil). Notably, many of the herbicides available to target this species will be unsuccessful in eradicating the plants. Routine monitoring should therefore be undertaken to detect new and emerging individuals; and, where possible new infestations should be controlled before they reach maturity

#### Revegetation / Natural Regeneration / Species Enrichment Plantings

As these areas comprise of the most intact vegetation across the zone, it is probable that with suitable management there will be high degree of natural recruitment and therefore little need for broad-scale revegetation. Appropriate actions to facilitate natural regeneration will include limiting encroachment by campers by delineating some of the camp sites with post and wire fencing; which has aided the process elsewhere in the Camping Reserve. Enrichment plantings with

species such as *Myrsine howittiana* (Mutton-wood), *Pittosporum bicolor* (Banyalla), *Acacia melanoxylon* (Blackwood) and *Hedycarya angustifolia* (Austral Mulberry) are also recommended. These species are tolerant of wetter and shaded positions, would provide a dense screen between camp sites and have suitable form to be grown near camp sites. Site appropriate weed management that is undertaken by skilled bushland restoration practitioners is also likely to promote the natural regeneration of ferns, and it is strongly recommended that this be encouraged to facilitate the return of character species.

### Low Quality Environmental – High Amenity

#### Composition and Condition

Areas assigned to this class include several linear strips along the foreshore between the rock beaching and Camping Reserve. These areas are heavily modified, with little native remnant vegetation persisting, and have a high concentration of problematic environmental weeds such as the dense mat-forming grasses *\*Cenchrus clandestinus* (Kikuyu) and *\*Stenotaphrum secundatum* (Buffalo Grass). Without effective control across large areas, the presence of these grasses is likely to limit the success of infill revegetation (with trees and shrubs), and it is therefore recommended that any revegetation works through these areas be delayed until such a time that large sections can be revegetated at once.

#### Environmental Weeds

The focus of management across this class should be to prevent the expansion of weeds into adjoining patches of higher quality vegetation, where appropriate intervention is likely to include continued slashing of the boundary tracks.

Key taxa that should be targeted for active control across the class include *\*Allium triquetrum* (Angled Onion), as well as dense-mat forming grasses such as *Cenchrus clandestinus* (Kikuyu) and *\*Stenotaphrum secundatum* (Buffalo Grass).

#### Other Management Concerns / Provisions

The access points created by the Committee to limit movement between the foreshore and the Camping Reserve have been successful, with revegetation either side of many of the points resulting in a high cover of vegetation which improves the landscape amenity by providing more continuity of habitat. The works also aid in bank stabilisation, and provide a buffer to the campers from the sea breezes, and it is recommended that they continue to be managed in such a way. Likewise, there are a small number of areas where post and wire fencing has helped to delineate between some of the camping sites and the remnant vegetation/revegetation areas creating a greater sense of privacy and intimacy for the campers hiring the sites. It is strongly recommended that this method of limiting movement in this fairly unobtrusive way be expanded into other parts of the reserve, particularly those areas where there is encroachment into the more intact remnant areas, or where remnant vegetation is currently providing this natural partition between camp sites (e.g. 44, 44a, 50-53, 56, 58, 61-70, 72, 73, 77-80, 82 and 83); this strategy which will help maintain the local character of the camp sites over time. In a number of instances these areas are grading into areas of Riparian Fern Scrub with ground water seepage.

The walking track within the Camping Reserve (near the cabins) requires routine annual maintenance to clear vegetation away from the track (<1m) and remove it from the immediate vicinity. Saliiently, when completing weed control adjacent to the track contractors need to be made aware of the populations of *Myrsine howittiana* (Mutton-wood) in the area; they are **not** *Pittosporum undulatum* (Sweet Pittosporum) and **should not be controlled**.



## 7.3.1.6 Inventory of Priority Weeds and Thematic Map Series

An inventory of the priority weeds mapped within the Northern Management Unit, by zone, during the October – December site visits is provided in Table 12. Maps that depict the diversity of the recorded weed flora are provided in Figure 38 to Figure 41 (page 79 to page 82). The first set of maps portrays the richness of herbs, graminoids and scramblers; both by species, and by species with reference to the underlying management zone. The second set of maps portrays the richness of trees and shrubs; by species, and by species with reference to the underlying management zone. The age class and abundance of several of the more populous weeds across the unit (e.g. *\*Delairea odorata* (Cape Ivy), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Plectranthus ciliatus* (African Spur-flower) and *\*Rubus anglocandicans* (Common Blackberry)) is depicted in Figure 42 to Figure 45 (page 83 to page 86).

Table 12 Life form and bioregional status of priority environmental weeds recorded by zone, Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023

| Scientific Name                                     | Common Name              | Life Form                        | Bioregional Status |                               |                                      | Presence by Zone |        |        |        | Population Notes   |
|---|--------------------------|----------------------------------|--------------------|-------------------------------|--------------------------------------|------------------|--------|--------|--------|--|
|   |                          |                                  | CaLP Act 1994      | Weed on National Significance | Victorian Weed Advisory Risk Ranking | Zone 1           | Zone 2 | Zone 3 | Zone 4 |  |
| <b>Graminoids</b>                                   |                          |                                  |                    |                               |                                      |                  |        |        |        |  |
| <i>Crocsmia X crocosmiiflora</i>                    | Montbretia               | Medium to small tufted graminoid | -                  | -                             | Very High Risk                       |                  |        | yes    |        | Restricted range within management zone  |
| <b>Herbs</b>  |                          |                                  |                    |                               |                                      |                  |        |        |        |  |
| <i>Agapanthus praecox</i> subsp. <i>orientalis</i>  | Agapanthus               | Large herb                       | -                  | -                             | Very High Risk                       |                  |        | yes    |        | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.  |
| <i>Allium triquetrum</i>                            | Angled Onion             | Medium herb                      | Restricted Weed    | -                             | High Risk                            |                  |        |        | yes    | Possibly more widespread than current mapping indicates.   |
| <i>Arum italicum</i> subsp. <i>italicum</i>         | Italian Cuckoo-pint      | Large herb                       | -                  | -                             | Moderately High Risk                 |                  |        | yes    |        | Restricted range within management zone  |
| <i>Chlorophytum comosum</i>                         | Spider Plant             | Medium herb                      | -                  | -                             | Moderately High Risk                 |                  |        | yes    |        | Restricted range within management zone  |
| <i>Crassula multicaeva</i> subsp. <i>multicaeva</i> | Shade Crassula           | Small or prostrate herb          | -                  | -                             | High Risk                            |                  |        | yes    |        | Restricted range within management zone  |
| <i>Dimorphotheca pluvialis</i>                      | Cape Marigold            | Medium herb                      | -                  | -                             | Lower Risk                           |                  |        | yes    |        | Restricted range within management zone  |
| <i>Foeniculum vulgare</i>                           | Fennel                   | Medium herb                      | Restricted Weed    | -                             | Very High Risk                       |                  |        | yes    |        | Restricted range within management zone  |
| <i>Gazania linearis</i>                             | Gazania                  | Medium herb                      | -                  | -                             | Very High Risk                       |                  |        |        | yes    | Restricted range within management zone  |
| <i>Plectranthus ciliatus</i>                        | African Spur-flower      | Large herb                       | -                  | -                             | Moderately High Risk                 | yes              | yes    |        | yes    | Limit the use of herbicide/over spraying in area due to high diversity of ferns, saturated soils and potential impacts to Burrowing Crayfish populations. Ideally control during summer or when area most dry. Remove material from site to prevent re-establishing. |
| <i>Zantedeschia aethiopica</i>                      | White Arum-lily          | Large herb                       | -                  | -                             | Very High Risk                       | yes              |        |        |        | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.  |
| <b>Palms</b>  |                          |                                  |                    |                               |                                      |                  |        |        |        |  |
| <i>Cordyline australis</i>                          | New Zealand Cabbage-tree | Palm                             | -                  | -                             | High Risk                            |                  |        |        | yes    | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.  |
| <i>Washingtonia</i> spp.                            | Fan Palm                 | Palm                             | -                  | -                             | -                                    |                  |        |        | yes    | Restricted range within management zone  |
| <b>Scramblers and Climbers</b>                      |                          |                                  |                    |                               |                                      |                  |        |        |        |  |
| <i>Asparagus scandens</i>                           | Asparagus Fern           | Scrambler or climber             | Restricted Weed    | YES                           | Very High Risk                       | yes              |        |        |        | -  |
| <i>Delairea odorata</i>                             | Cape Ivy                 | Scrambler or climber             | -                  | -                             | Very High Risk                       | yes              |        | yes    | yes    | Species difficult to eradicate, will require ongoing management and follow-up to prevent the species spreading elsewhere within the zone.  |
| <i>Dipogon lignosus</i>                             | Common Dipogon           | Scrambler or climber             | -                  | -                             | Very High Risk                       |                  |        | yes    |        | Species currently restricted within zone and eradication of mature plants possible. Ongoing follow-up will be required.  |

| Scientific Name                                      | Common Name            | Life Form            | Bioregional Status         |                               |                                      | Presence by Zone |        |        |        | Population Notes   |
|--|------------------------|----------------------|----------------------------|-------------------------------|--------------------------------------|------------------|--------|--------|--------|--|
|  |                        |                      | CaLP Act 1994              | Weed on National Significance | Victorian Weed Advisory Risk Ranking | Zone 1           | Zone 2 | Zone 3 | Zone 4 |  |
| <i>Hedera hibernica</i>                              | Atlantic Ivy           | Scrambler or climber | -                          | -                             | Very High Risk                       |                  |        | yes    |        | Species currently restricted within zone and eradication of mature plants possible. Ongoing follow-up will be required.  |
| <i>Passiflora edulis</i>                             | Black Passion-fruit    | Scrambler or climber | -                          | -                             | Medium Risk                          | yes              |        |        |        | Species currently restricted within zone and eradication of mature plants possible. Ongoing follow-up will be required.  |
| <i>Rubus anglocandicans</i>                          | Common Blackberry      | Scrambler or climber | Regionally Controlled Weed | YES                           | High Risk                            | yes              | yes    | yes    |        | Species currently restricted within zone and eradication of mature plants possible. Ongoing follow-up will be required.  |
| <i>Tradescantia fluminensis</i>                      | Wandering Jew          | Scrambler or climber | -                          | -                             | Very High Risk                       |                  |        | yes    |        | Species currently restricted within zone and eradication of mature plants possible. Ongoing follow-up will be required.  |
| <i>Vinca major</i>                                   | Blue Periwinkle        | Scrambler or climber | -                          | -                             | High Risk                            |                  |        | yes    | yes    | Species largely in the more degraded areas, contain populations here. Where the species currently has a low density, and is within areas of higher ecological value the species should be treated. |
| <b>Small and Medium Shrubs</b>                       |                        |                      |                            |                               |                                      |                  |        |        |        |  |
| <i>Cestrum elegans</i>                               | Elegant Poison-berry   | Medium shrub         | -                          | -                             | Very High Risk                       |                  | yes    |        |        | Species is currently localised but high priority due to the ability for the species to spread widely.  |
| <i>Coprosma repens</i>                               | Mirror Bush            | Medium shrub         | -                          | -                             | Very High Risk                       |                  |        | yes    |        | Species is currently localised but high priority due to the ability for the species to spread widely.  |
| <i>Grevillea spp./cv.</i>                            | Grevillea (cultivated) | Small shrub          | -                          | -                             | -                                    |                  |        | yes    |        | Planted, currently within reserve being managed as private garden  |
| <i>Hydrangea macrophylla</i>                         | Hydrangea              | Medium shrub         | -                          | -                             | Lower Risk                           |                  |        | yes    |        | Species currently within reserve being managed as private garden   |
| <i>Melaleuca armillaris</i> subsp. <i>armillaris</i> | Giant Honey-myrtle     | Medium shrub         | -                          | -                             | Moderately High Risk                 |                  |        | yes    |        | Planted specimens in high profile areas around picnic grounds  |
| <i>Prunus cerasifera</i>                             | Cherry Plum            | Medium shrub         | -                          | -                             | High Risk                            |                  |        |        | yes    | Species is currently localised but high priority due to the ability for the species to spread widely.  |
| <b>Trees and Large Shrubs</b>                        |                        |                      |                            |                               |                                      |                  |        |        |        |  |
| <i>Acacia longifolia</i>                             | Sallow Wattle          | Tree or large shrub  | -                          | -                             | Very High Risk                       |                  |        |        | yes    | -  |
| <i>Corymbia ficifolia</i>                            | Flowering Gum          | Tree or large shrub  | -                          | -                             | -                                    |                  |        | yes    |        | Planted specimens in high profile areas around picnic grounds  |
| <i>Eriobotrya japonica</i>                           | Loquat                 | Tree or large shrub  | -                          | -                             | Moderately High Risk                 |                  |        |        | yes    | Planted specimens  |
| <i>Eucalyptus botryoides</i>                         | Southern Mahogany      | Tree or large shrub  | -                          | -                             | Moderately High Risk                 |                  |        |        | yes    | Planted specimens in high profile areas around picnic grounds  |
| <i>Ficus carica</i>                                  | Fig                    | Tree or large shrub  | -                          | -                             | High Risk                            |                  |        | yes    |        | Planted specimens in high profile areas around picnic grounds  |
| <i>Fraxinus</i> spp.                                 | Ash                    | Tree or large shrub  | -                          | -                             | High or Very High Risk               |                  |        |        | yes    | Planted specimens in high profile areas around picnic grounds  |
| <i>Ilex aquifolium</i>                               | English Holly          | Tree or large shrub  | -                          | -                             | Very High Risk                       |                  |        | yes    |        | Small number of plants recorded  |
| <i>Pittosporum undulatum</i>                         | Sweet Pittosporum      | Tree or large shrub  | -                          | -                             | Very High Risk                       | yes              | yes    | yes    | yes    | Widespread at low density, target high quality areas first   |
| <i>Salix X fragilis</i>                              | Crack Willow           | Tree or large shrub  | Restricted Weed            | YES                           | Very High Risk                       |                  |        | yes    |        | Small number of plants recorded  |
| <i>Syzygium smithii</i>                              | Lilly Pilly            | Tree or large shrub  | -                          | -                             | Medium Risk                          |                  |        | yes    |        | Small number of plants recorded  |



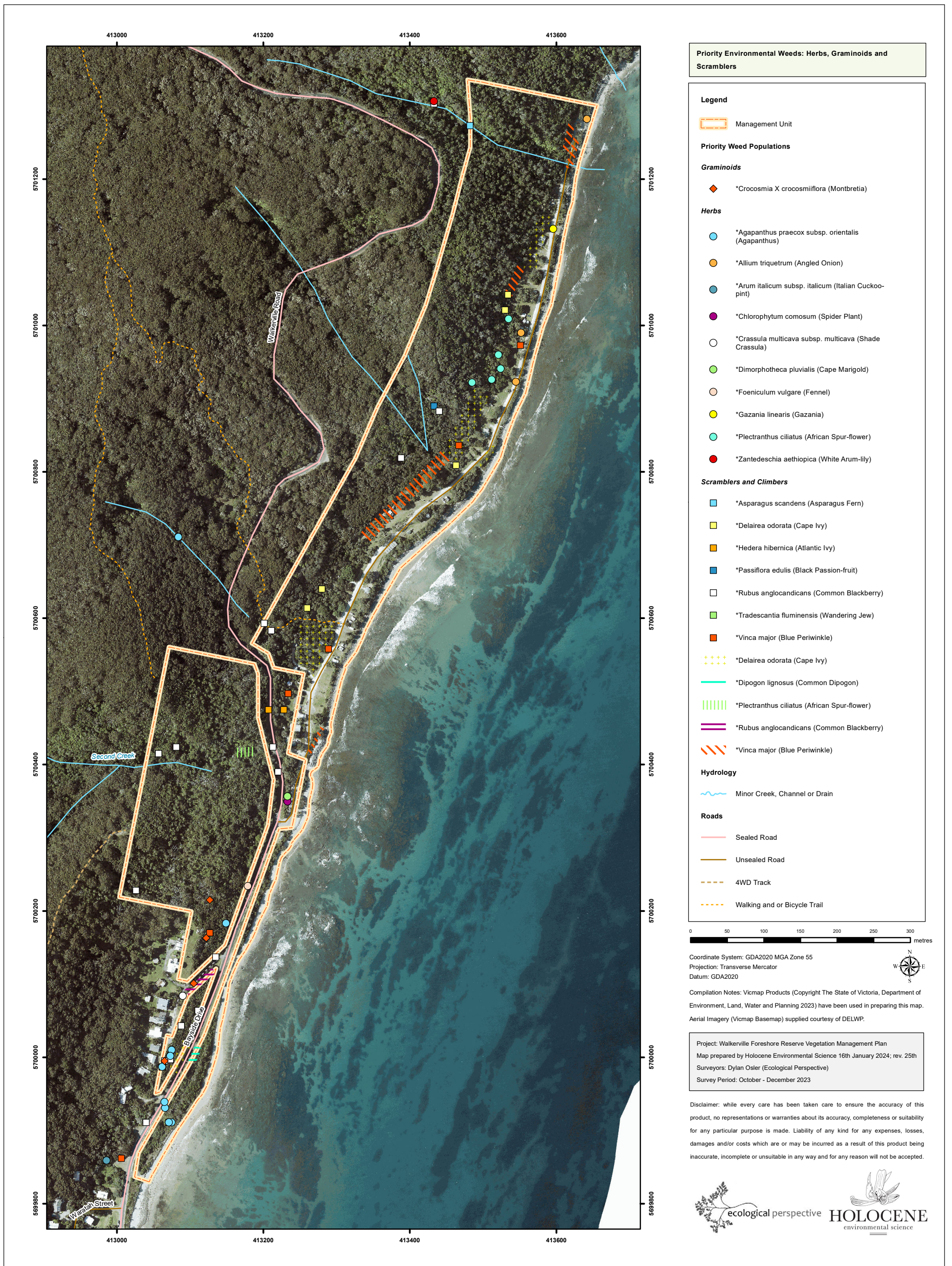


Figure 38 Priority environmental weeds by life form (herbs, graminoids and scramblers), Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023



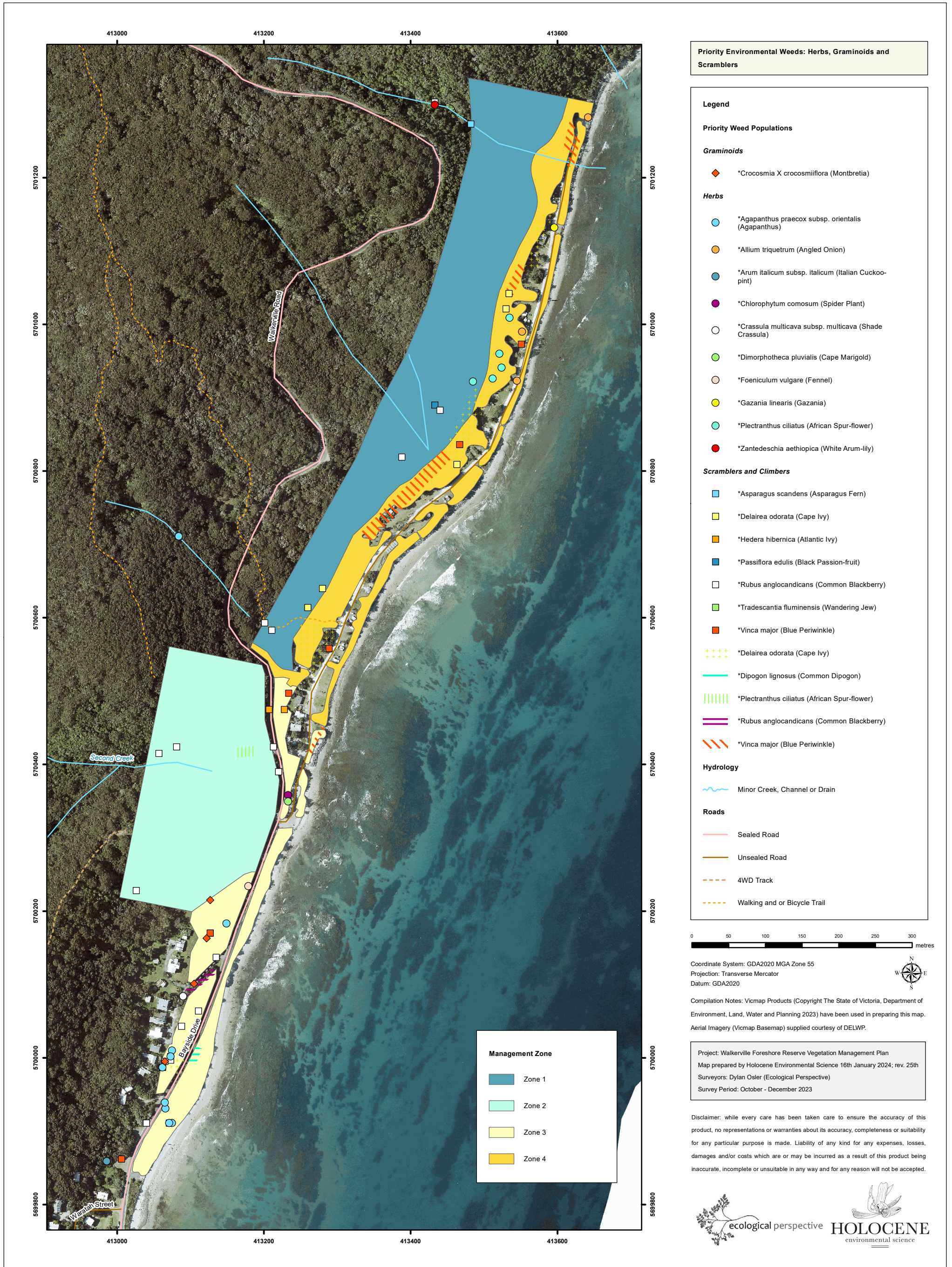


Figure 39 Priority environmental weeds by life form (herbs, graminoids and scramblers) and zone, Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023



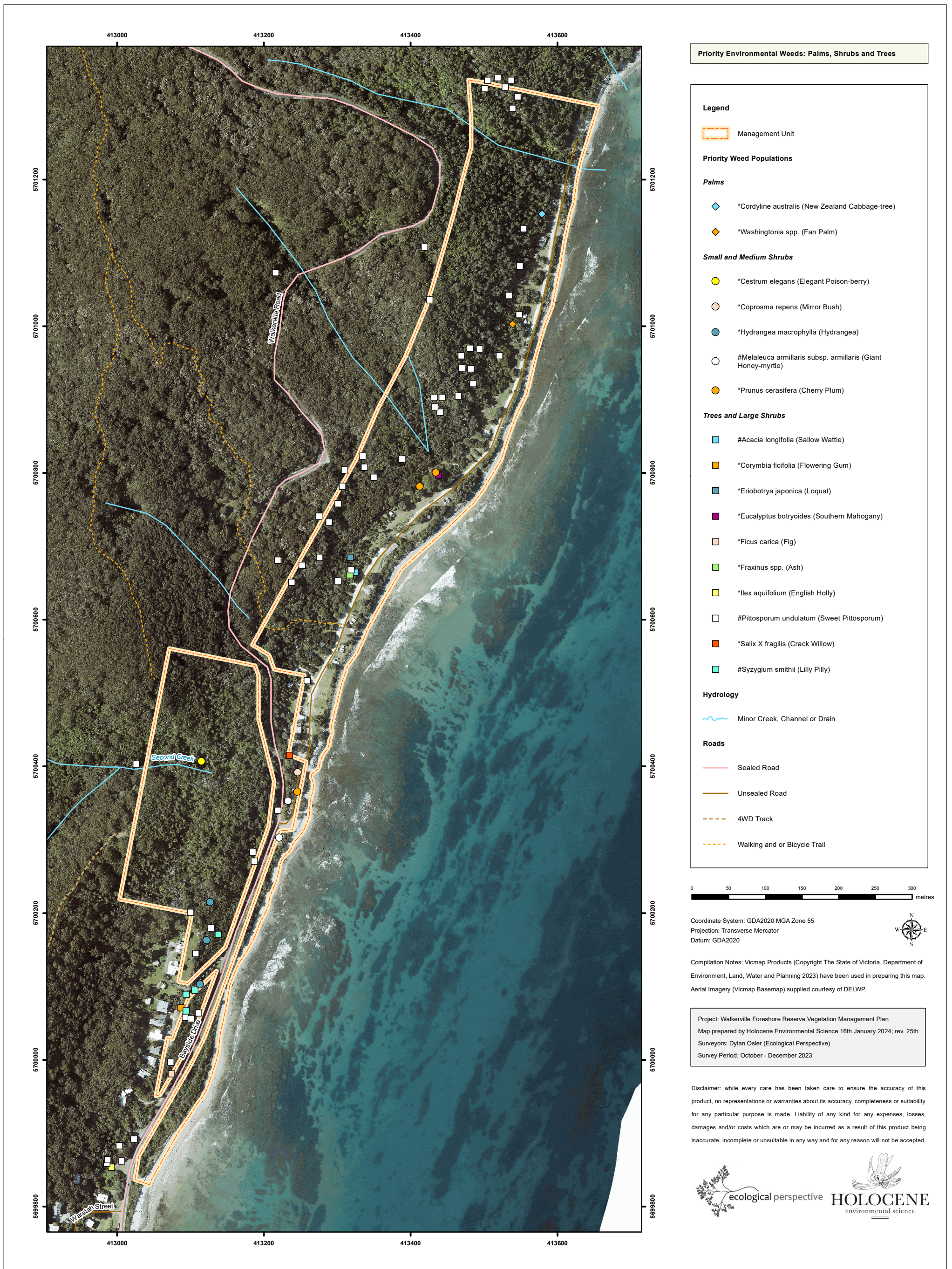


Figure 40 Priority environmental weeds by life form (palms, shrubs and trees), Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023



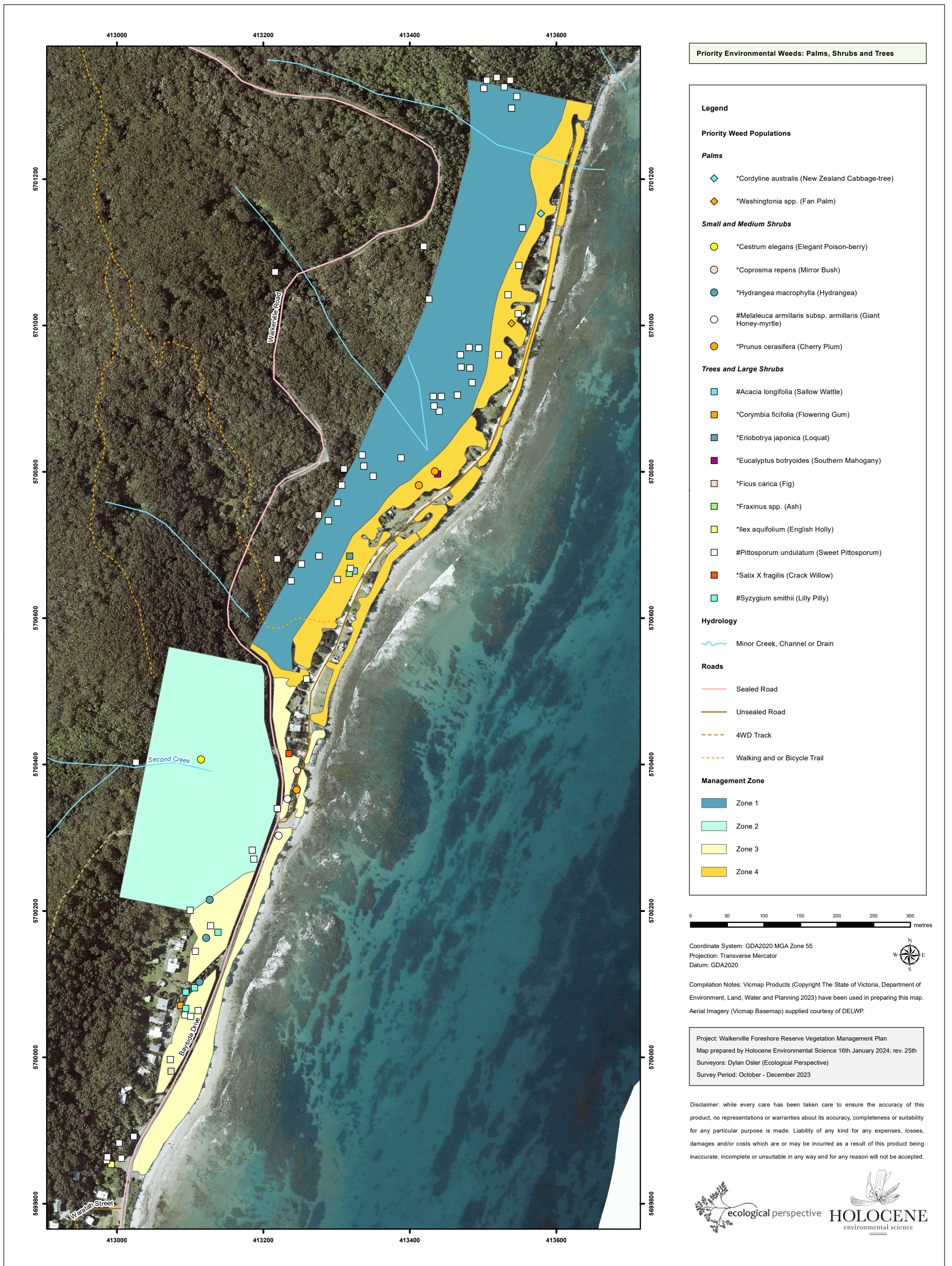


Figure 41 Priority environmental weeds by life form (palms, shrubs and trees) and zone, Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023



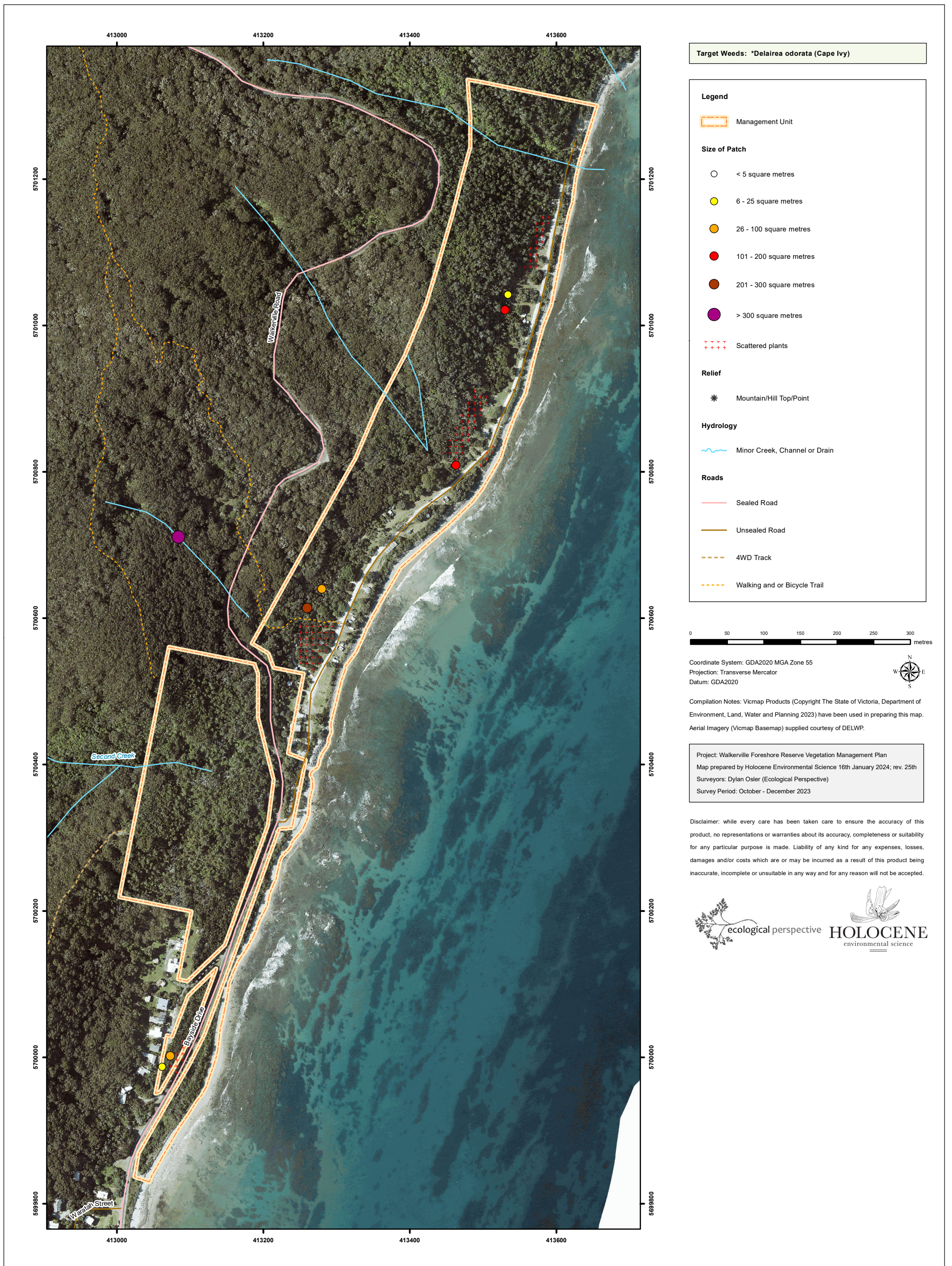


Figure 42 Extent and abundance of \*Delairea odorata (Cape Ivy), Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023



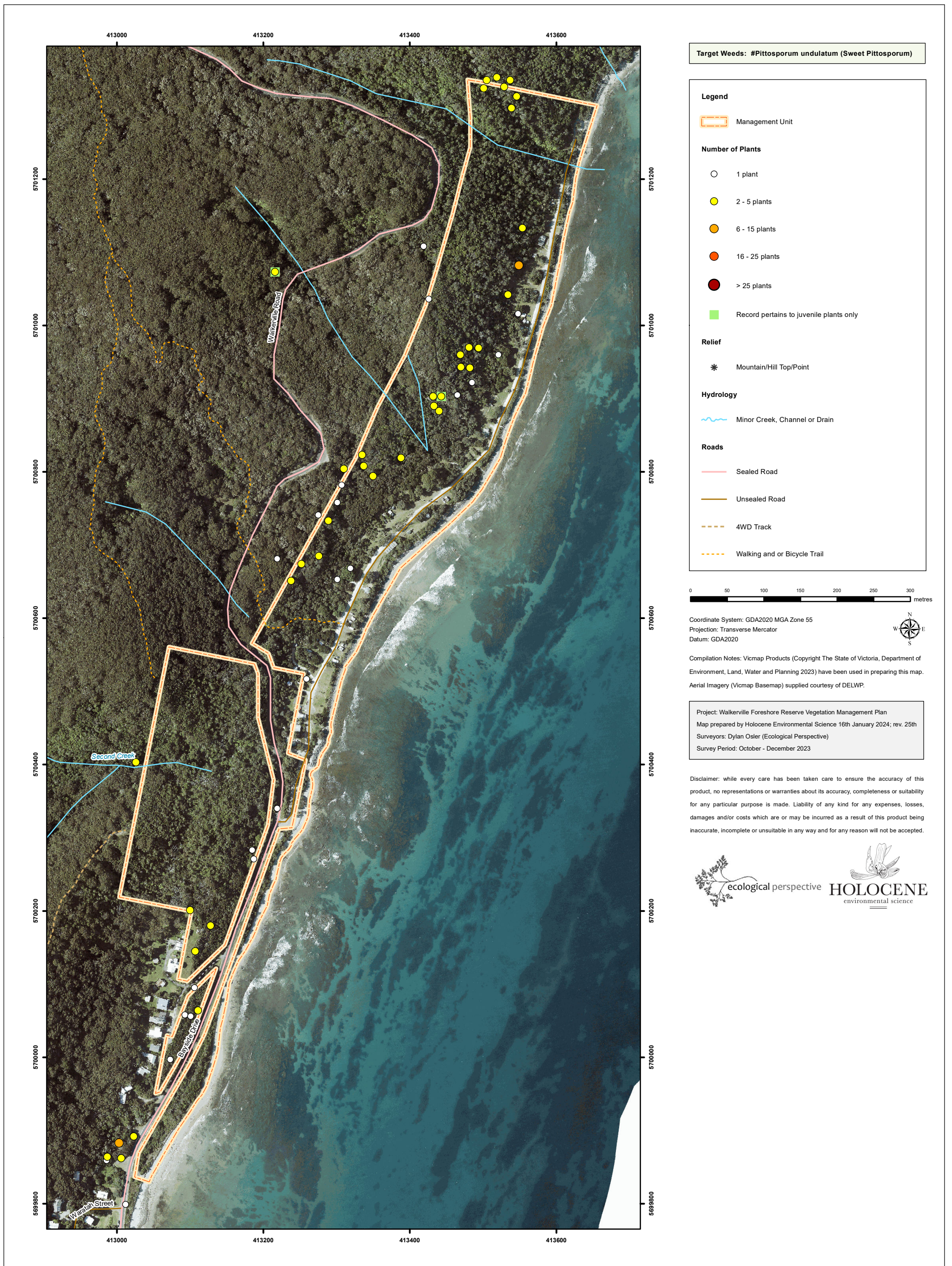


Figure 43 Extent and abundance of #Pittosporum undulatum (Sweet Pittosporum), Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023



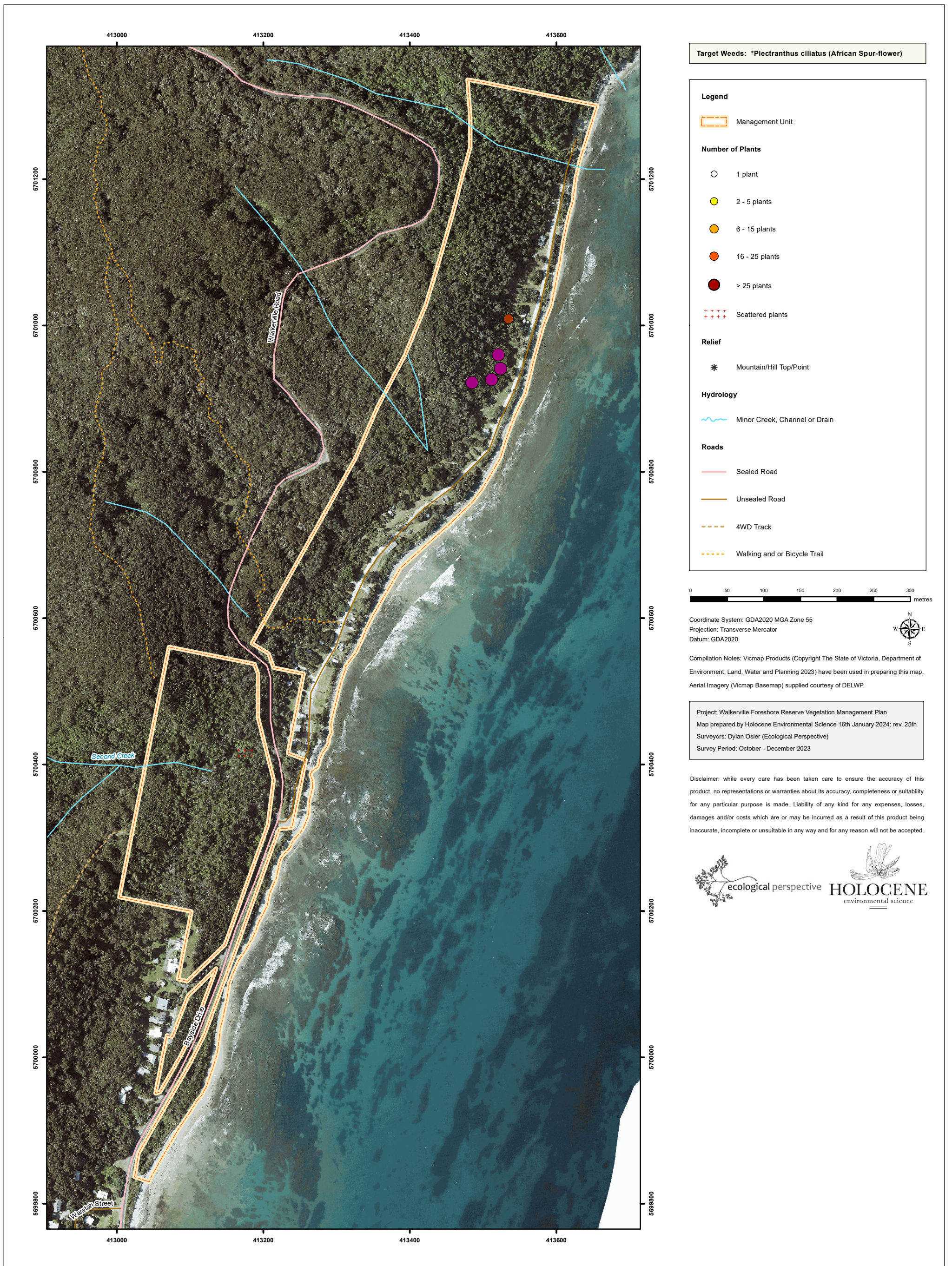


Figure 44 Extent and abundance of \*Plectranthus ciliatus (African Spur-flower), Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023



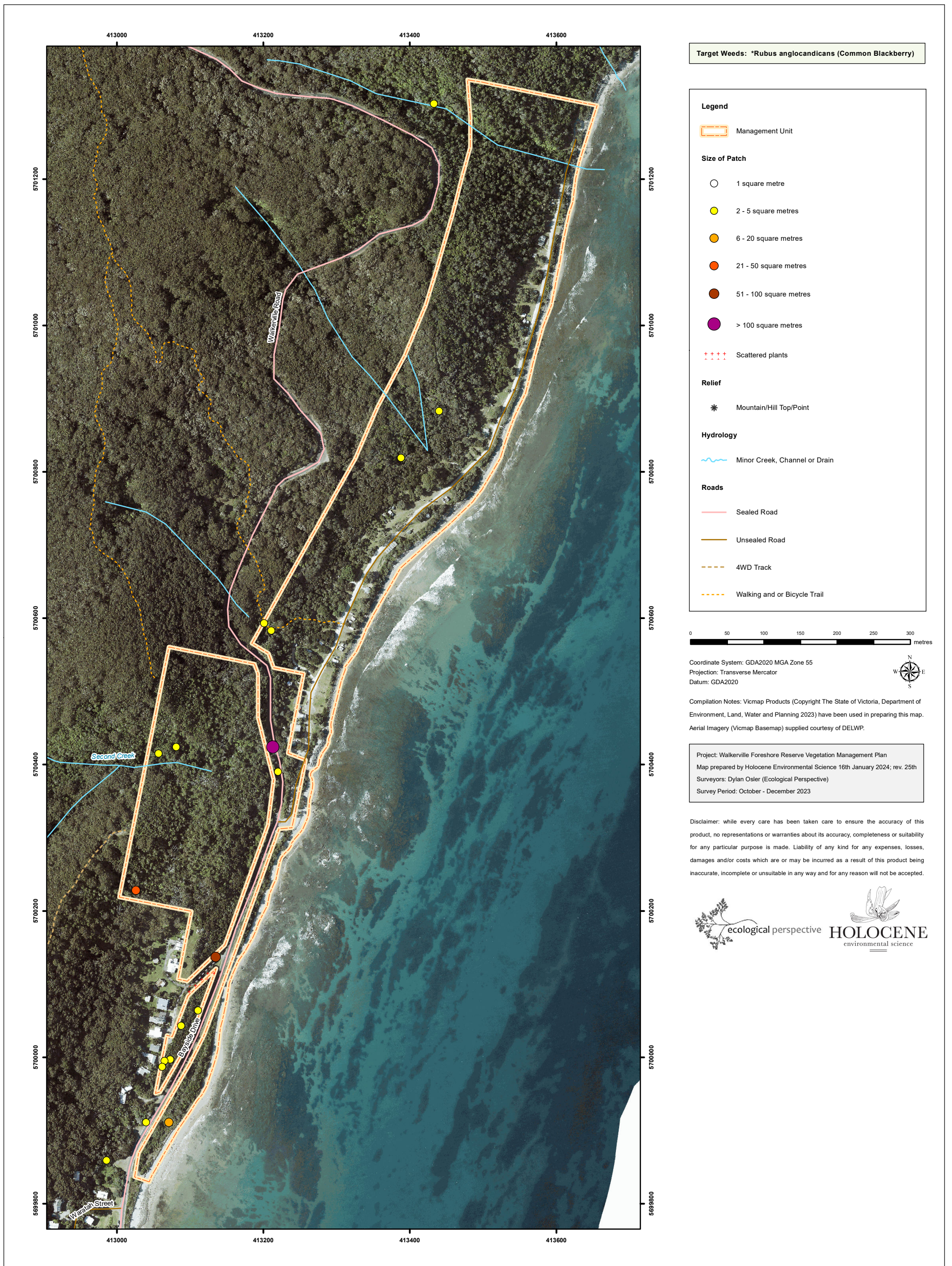


Figure 45 Extent and abundance of \**Rubus anglocandicans* (Common Blackberry), Northern Management Unit, Walkerville Foreshore Reserve, October – December 2023



7.3.1.7 Summary of Proposed Works by Year and Zone

Weed management actions that are proposed for the Northern Management Unit are itemised in Table 13. An action is given for each of the priority weeds/overabundant flora that were recorded during the 2023 surveys, and an overall *strategy* has been assigned (e.g. eradicate, control or contain) for each taxon, as well as appropriate *treatment methods*. Reference is also made to the *zone* where works should occur, the *sequencing of works* (i.e. whether they should be undertaken in Year 1 to Year 5), and the appropriate *frequency* and *timing* of each action. Should it not be possible to complete all proposed actions in each Year, then consideration should be given to the *priority* assigned to each action, and high priority actions completed ahead of medium and low priority actions. Sequencing is provided for Year 1 – Year 5, as well as an ongoing maintenance period.

Table 13 Summary of proposed weed management actions by year and zone, Northern Management Unit, Walkerville Foreshore Reserve

| Scientific Name                             | Common Name              | Strategy  | Target  | Treatment Method  | Priority | Action  | Frequency     | Timing        | Year 1       | Year 2       | Year 3       | Year 4       | Year 5       | Ongoing Maintenance Period |
|---|--------------------------|-----------|---|---|----------|---|---------------|---------------|--------------|--------------|--------------|--------------|--------------|----------------------------|
| <b>Graminoids</b>                           |                          |           |   |   |          |   |               |               |              |              |              |              |              |                            |
| <i>Crocsmia X crocosmiiflora</i>            | Montbretia               | Eradicate | Eradicate taxon / life form from zone   | Hand weed/Back Pack (low volume spraying)               | High     | Actively control all plants across the zone                     | Once per year | At any time   | Zone 3       | Zone 3       | Zone 3       | Zone 3       |              |                            |
| <b>Herbs</b>                                |                          |           |   |   |          |   |               |               |              |              |              |              |              |                            |
| <i>Agapanthus praecox subsp. orientalis</i> | Agapanthus               | Eradicate | Eradicate taxon / life form from zone   | Hand weed/Back Pack (low volume spraying)               | High     | Actively control all smaller localised populations              | Once per year | At any time   | Zone 3       | Zone 3       | Zone 3       | Zone 3       | Zone 3       | Zone 3                     |
| <i>Allium triquetrum</i>                    | Angled Onion             | Contain   | Prevent the target species from increasing in cover or extent across the zone | Back Pack (low volume spraying)                         | Medium   | Ensure that the species does not spread into adjoining areas    | Once per year | Winter/Spring | Zone 4       | Zone 4       | Zone 4       | Zone 4       | Zone 4       | Zone 4                     |
| <i>Arum italicum subsp. italicum</i>        | Italian Cuckoo-pint      | Eradicate | Eradicate taxon / life form from zone   | Hand weed/Back Pack (low volume spraying)               | Medium   | Actively control all smaller localised populations              | Once per year | At any time   | Zone 3       | Zone 3       | Zone 3       |              |              |                            |
| <i>Chlorophytum comosum</i>                 | Spider Plant             | Eradicate | Eradicate taxon / life form from zone   | Hand weed/Back Pack (low volume spraying)               | Medium   | Actively control all smaller localised populations              | Once per year | At any time   | Zone 3       | Zone 3       |              |              |              |                            |
| <i>Crassula multicava subsp. multicava</i>  | Shade Crassula           | Eradicate | Eradicate taxon / life form from zone   | Hand weed/Back Pack (low volume spraying)               | High     | Actively control all smaller localised populations              | Once per year | At any time   | Zone 3       | Zone 3       | Zone 3       |              |              |                            |
| <i>Dimorphotheca pluvialis</i>              | Cape Marigold            | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Back Pack (low volume spraying)           | Medium   | Actively control all garden escapee populations within the zone | Once per year | At any time   | Zone 3       | Zone 3       |              |              |              |                            |
| <i>Foeniculum vulgare</i>                   | Fennel                   | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Back Pack (low volume spraying)           | High     | Actively control all smaller localised populations              | Once per year | At any time   | Zone 3       | Zone 3       |              |              |              |                            |
| <i>Gazania linearis</i>                     | Gazania                  | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Back Pack (low volume spraying)           | Medium   | Actively control all smaller localised populations              | Once per year | At any time   | Zone 4       | Zone 4       |              |              |              |                            |
| <i>Plectranthus ciliatus</i>                | African Spur-flower      | Eradicate | Eradicate taxon / life form from zone   | Hand weed/Cut and Paint                                 | High     | Actively control all smaller localised populations              | Once per year | Summer/Autumn | Zone 1, 2, 4 | Zone 1, 2, 4 | Zone 1, 2, 4 | Zone 1, 2, 4 | Zone 1, 2, 4 | Zone 1, 2, 4               |
| <i>Zantedeschia aethiopica</i>              | White Arum-lily          | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Actively control all smaller localised populations              | Once per year | Spring/Summer | Zone 1       | Zone 1       | Zone 1       | Zone 1       | Zone 1       | Zone 1                     |
| <b>Palms</b>                                |                          |           |   |   |          |   |               |               |              |              |              |              |              |                            |
| <i>Cordylina australis</i>                  | New Zealand Cabbage-tree | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Hand weed/Back Pack (low volume spraying) | Medium   | Actively control all smaller localised populations              | Once per year | Spring/Summer | Zone 4       | Zone 4       |              |              |              |                            |
| <i>Washingtonia spp.</i>                    | Fan Palm                 | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Hand weed/Back Pack (low volume spraying) | Medium   | Actively control all smaller localised populations              | Once per year | At any time   | Zone 4       | Zone 4       |              |              |              |                            |
| <b>Scramblers and Climbers</b>              |                          |           |   |   |          |   |               |               |              |              |              |              |              |                            |



| Scientific Name                 | Common Name            | Strategy  | Target  | Treatment Method  | Priority | Action  | Frequency        | Timing        | Year 1       | Year 2       | Year 3       | Year 4       | Year 5       | Ongoing Maintenance Period |
|---------------------------------|------------------------|-----------|---|---|----------|---|------------------|---------------|--------------|--------------|--------------|--------------|--------------|----------------------------|
| <i>Asparagus scandens</i>       | Asparagus Fern         | Eradicate | Eradicate taxon / life form from zone   | Hand weed/Back Pack (low volume spraying)               | High     | Actively control all smaller localised populations  | Once per year    | Summer        | Zone 1       | Zone 1       |              |              |              |                            |
| <i>Delairea odorata</i>         | Cape Ivy               | Control   | Reduce cover of target species by 50 % within the zone                        | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut back any aerial growth initially and then cut and paint large stems. Hand weed in areas with high fern diversity                      | Once per quarter | Spring/Summer | Zone 1, 3, 4 | Zone 1, 3, 4 | Zone 1, 3, 4 | Zone 1, 3, 4 | Zone 1, 3, 4 | Zone 1, 3, 4               |
| <i>Dipogon lignosus</i>         | Common Dipogon         | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut back any aerial growth initially and then cut and paint large stems, back pack elsewhere. Hand weed in areas with high fern diversity | Once per quarter | At any time   | Zone 3       | Zone 3       | Zone 3       | Zone 3       | Zone 3       | Zone 3                     |
| <i>Hedera hibernica</i>         | Atlantic Ivy           | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut back any aerial growth initially and paint large stems, back pack elsewhere. Hand weed in areas with high fern diversity              | Once per year    | At any time   | Zone 3       | Zone 3       | Zone 3       | Zone 3       |              |                            |
| <i>Passiflora edulis</i>        | Black Passion-fruit    | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut back any aerial growth initially and then cut and paint large stems, back pack elsewhere. Hand weed in areas with high fern diversity | Once per year    | At any time   | Zone 1       | Zone 1       | Zone 1       | Zone 1       |              |                            |
| <i>Rubus anglocandicans</i>     | Common Blackberry      | Control   | Reduce cover of target species by 50 % within the zone                        | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut and paint in areas with good understorey and or fern diversity. Back pack elsewhere.  | Once per year    | Summer        | Zone 1, 2, 3 | Zone 1, 2, 3 | Zone 1, 2, 3 | Zone 1, 2, 3 |              |                            |
| <i>Tradescantia fluminensis</i> | Wandering Jew          | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Hand weed/Back Pack (low volume spraying) | Medium   | Cut back any aerial growth initially and then cut and paint large stems, back pack elsewhere. Hand weed in areas with high fern diversity | Once per year    | At any time   | Zone 3       | Zone 3       | Zone 3       | Zone 3       |              |                            |
| <i>Vinca major</i> <sup>4</sup> | Blue Periwinkle        | Eradicate | Eradicate taxon / life form from zone   | Back Pack (low volume spraying)                         | High     | Cut back any aerial growth initially and then cut and paint large stems, back pack elsewhere. Hand weed in areas with high fern diversity | Once per year    | At any time   | Zone 3, 4    | Zone 3, 4    | Zone 3, 4    | Zone 3, 4    | Zone 3, 4    | Zone 3, 4                  |
| <i>Vinca major</i>              | Blue Periwinkle        | Contain   | Prevent the target species from increasing in cover or extent across the zone | Back Pack (low volume spraying)                         | Low      | Prevent the expansion outside of these areas or until other management objectives are met before treatment here.                          | Once per year    | At any time   | Zone 3, 4    | Zone 3, 4    | Zone 3, 4    | Zone 3, 4    | Zone 3, 4    | Zone 3, 4                  |
| <b>Small and Medium Shrubs</b>  |                        |           |   |   |          |   |                  |               |              |              |              |              |              |                            |
| <i>Cestrum elegans</i>          | Elegant Poison-berry   | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | High     | Remove or stack any cut material upslope and not in contact with the ground to prevent reshooting.  | Once per year    | At any time   | Zone 2       | Zone 2       | Zone 2       |              |              |                            |
| <i>Coprosma repens</i>          | Mirror Bush            | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | High     | Target all plants   | Once per year    | At any time   | Zone 3       | Zone 3       |              |              |              |                            |
| <i>Grevillea</i> spp./cv.       | Grevillea (cultivated) | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | Low      | Target all plants   | Once per year    | At any time   | Zone 3       |              |              |              |              |                            |
| <i>Hydrangea macrophylla</i>    | Hydrangea              | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | High     | Remove or stack any cut material upslope and not in contact with the ground to prevent reshooting.  | Once per year    | At any time   | Zone 3       | Zone 3       | Zone 3       |              |              |                            |

<sup>4</sup> Two strategies are proposed for the management of *Vinca major* in the Northern Management Unit. The *Eradicate* strategy applies to where the species currently has a low density, and is within areas of higher ecological value the species should be treated. The *Contain* strategy applies where the species largely occurs in the more degraded areas.



| Scientific Name                                      | Common Name        | Strategy  | Target  | Treatment Method             | Priority | Action  | Frequency     | Timing      | Year 1          | Year 2             | Year 3          | Year 4          | Year 5          | Ongoing Maintenance Period |
|--|--------------------|-----------|---|------------------------------|----------|---|---------------|-------------|-----------------|--------------------|-----------------|-----------------|-----------------|----------------------------|
| <i>Melaleuca armillaris</i> subsp. <i>armillaris</i> | Giant Honey-myrtle | Contain   | Prevent the target species from increasing in cover or extent across the zone | Cut and Paint/Drill and Fill | Low      | Leave mature plants and replace as they senesce. Control any juveniles/recruitment.                     | Once per year | At any time | Zone 3          | Zone 3             | Zone 3          |                 |                 |                            |
| <i>Prunus cerasifera</i>                             | Cherry Plum        | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill | High     | Target all plants   | Once per year | Summer      | Zone 4          | Zone 4             |                 |                 |                 |                            |
| <b>Trees and Large Shrubs</b>                        |                    |           |   |                              |          |   |               |             |                 |                    |                 |                 |                 |                            |
| <i>Acacia longifolia</i>                             | Sallow Wattle      | Control   | Reduce cover of target species by 50 % within the zone                        | Cut and Paint/Drill and Fill | High     | Target juvenile plants initially and mature plants in high quality area.                                | Once per year | At any time | Zone 4          | Zone 4             | Zone 4          | Zone 4          | Zone 4          | Zone 4                     |
| <i>Corymbia ficifolia</i>                            | Flowering Gum      | Contain   | Prevent the target species from increasing in cover or extent across the zone | Cut and Paint/Drill and Fill | Low      | Leave mature plants and replace as they senesce. Control any juveniles/recruitment.                     | Once per year | At any time | Zone 3          | Zone 3             | Zone 3          |                 |                 |                            |
| <i>Eriobotrya japonica</i>                           | Loquat             | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill | Low      | Target all plants   | Once per year | At any time | Zone 4          | Zone 4             | Zone 4          |                 |                 |                            |
| <i>Eucalyptus botryoides</i>                         | Southern Mahogany  | Contain   | Prevent the target species from increasing in cover or extent across the zone | Cut and Paint/Drill and Fill | Low      | Leave mature plants and replace as they senesce. Control any juveniles/recruitment.                     | Once per year | At any time | Zone 4          | Zone 4             | Zone 4          |                 |                 |                            |
| <i>Ficus carica</i>                                  | Fig                | Contain   | Prevent the target species from increasing in cover or extent across the zone | Cut and Paint/Drill and Fill | Low      | Leave mature plants and replace as they senesce. Control any juveniles/recruitment.                     | Once per year | At any time | yes             | yes                | yes             |                 |                 |                            |
| <i>Fraxinus spp.</i>                                 | Ash                | Contain   | Prevent the target species from increasing in cover or extent across the zone | Cut and Paint/Drill and Fill | Low      | Leave mature plants and replace as they senesce. Control any juveniles/recruitment.                     | Once per year | At any time | Zone 4          | Zone 4             | Zone 4          |                 |                 |                            |
| <i>Ilex aquifolium</i>                               | English Holly      | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill | High     | Target all plants   | Once per year | At any time | Zone 3          | Zone 3 (follow-up) |                 |                 |                 |                            |
| <i>Pittosporum undulatum</i>                         | Sweet Pittosporum  | Control   | Reduce cover of target species by 50 % within the zone                        | Cut and Paint/Drill and Fill | Medium   | Initially targeting female and juvenile plants in areas with high density, elsewhere control all plants | Once per year | At any time | Zone 1, 2, 3, 4 | Zone 1, 2, 3, 4    | Zone 1, 2, 3, 4 | Zone 1, 2, 3, 4 | Zone 1, 2, 3, 4 | Zone 1, 2, 3, 4            |
| <i>Salix X fragilis</i>                              | Crack Willow       | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill | High     | Target all plants   | Once per year | Summer      | Zone 3          | Zone 3 (follow-up) |                 |                 |                 |                            |
| <i>Syzygium smithii</i>                              | Lilly Pilly        | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill | Medium   | Target all plants   | Once per year | Summer      | Zone 3          |                    |                 |                 |                 |                            |



### 7.3.2 Central Management Unit

#### 7.3.2.1 Overview

The Central Management Unit has been into five zones (see Table 14 for an overview); the spatial extent of these is depicted in Figure 46 (page 91). The delineation of zones was based on vegetation and habitat type and condition, coupled with the range of threatening processes/management issues evident at the time of survey. Consideration was also given to visitor amenity.

**Table 14 Inventory of zones, Central Management Unit, Walkerville Foreshore Reserve**

| Management Zone | Land Form / Character  | Area                            |
|-----------------|--|---------------------------------|
| Zone 1          | <ul style="list-style-type: none"> <li>A core block of vegetation that encompasses Macpherson Creek and is flanked by Cape Liptrap Coastal Park to the west, and Bayside Drive to the east.</li> <li>The zone, which largely comprises of remnant vegetation, supports a range of forest and woodland types that include a number of regionally significant EVCs, and has a relatively low cover of priority weeds.</li> </ul>   | 22,080 m <sup>2</sup> (2.21 Ha) |
| Zone 2          | <ul style="list-style-type: none"> <li>A narrow linear band of vegetation between Bayside Drive and the beach; the northern extent of the zone approximately aligns with Waratah Street, while the southern extent approximately aligns with Macpherson Creek.</li> <li>The zone principally comprises of remnant native vegetation with a relatively low cover of weeds, however, the structure of vegetation has been modified, and species richness is lower than typical of the constituent EVCs.</li> <li>There is informal beach access from parts of the zone.</li> </ul> | 3,565 m <sup>2</sup> (0.36 Ha)  |
| Zone 3          | <ul style="list-style-type: none"> <li>Area adjacent to the Walkerville North Boat Ramp and the extension of Bayside Drive at the southern end of the Management Unit.</li> <li>Some remnant native vegetation persists, although it has high cover of problematic environmental weeds.</li> <li>Vegetation was typically characterised by modified structure and lower than typical species diversity for the constituent EVC.</li> <li>Visitor amenities include the Walkerville North Boat Ramp.</li> </ul>   | 1,970 m <sup>2</sup> (0.20 Ha)  |
| Zone 4          | <ul style="list-style-type: none"> <li>Area of rock beaching alongside Bayside Drive; the zone runs from approximately south of Macpherson Creek to just south of the Walkerville North Boat Ramp.</li> <li>Patchy revegetation works undertaken following the installation of rock.</li> <li>Visitor amenities include walking tracks and formal (stepped) access to the beach.</li> </ul>  | 3,400 m <sup>2</sup> (0.34 Ha)  |
| Zone 5          | <ul style="list-style-type: none"> <li>A small block of vegetation to the west of Bayside Drive, that is bordered by Bayside Drive to the east and flanked by private properties in Waratah Street to the west.</li> <li>Vegetation is structurally intact in areas, however, has a high proportion of weed including scramblers and climbers.</li> <li>Some sections of the zone are currently being managed by neighbouring landowners.</li> </ul>   | 1,985 m <sup>2</sup> (0.20 Ha)  |

A detailed description of each zone, coupled with a discussion of management recommendations specific to that zone, is provided in Section 7.3.2.2 to Section 7.3.2.6. The descriptions also reference the flora and fauna supported by each zone, as well as the broad vegetation condition classes that were assigned following the site visits.

An inventory of the weeds mapped across the Central Management Unit during the October – December site visits is provided in Section 7.3.2.7, and a summary of proposed management actions for the unit is provided in Section 7.3.2.8.



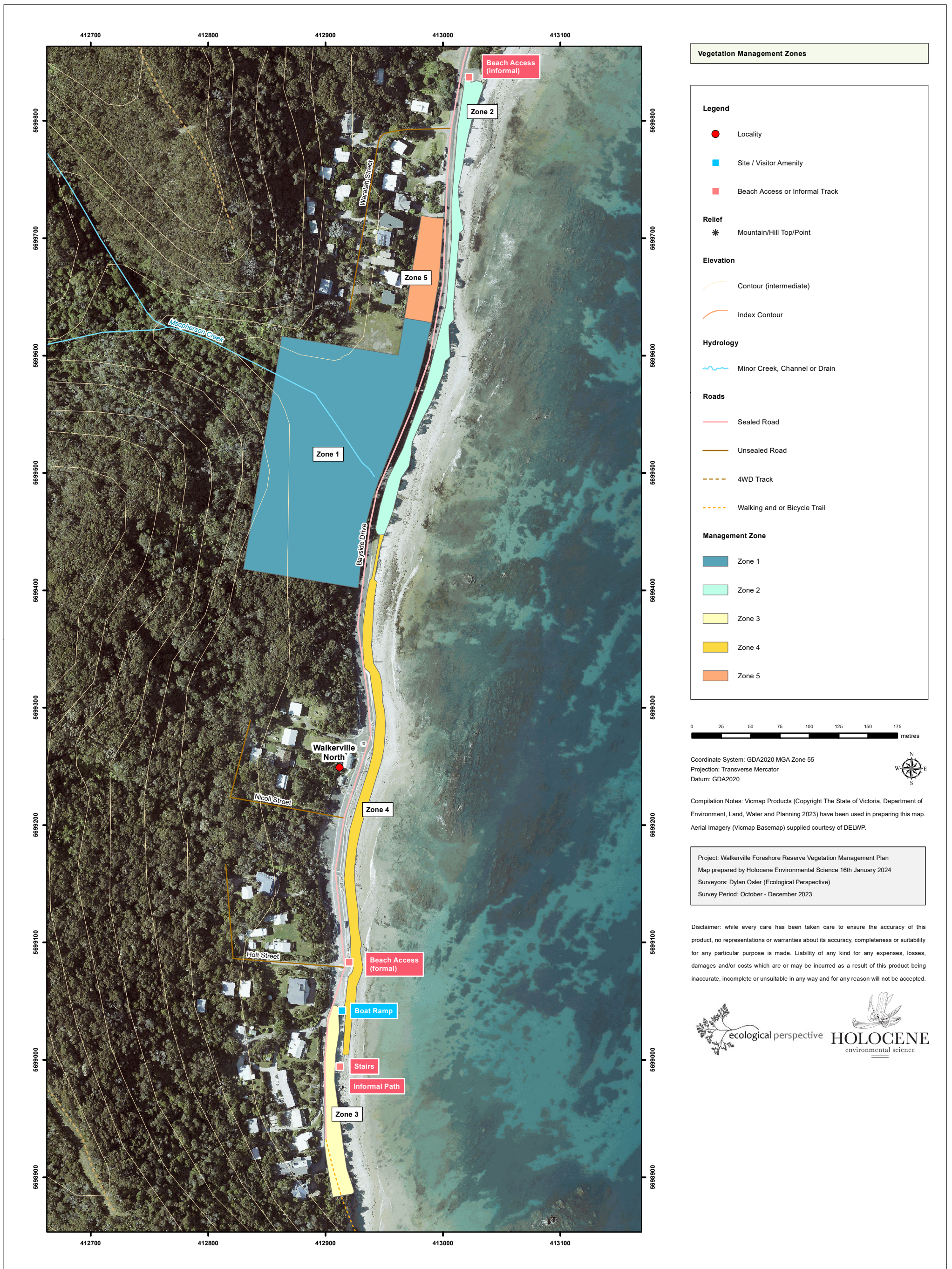


Figure 46 Vegetation Management Zones, Central Management Unit, Walkerville Foreshore Reserve, December 2023



## 7.3.2.2 Zone 1

| Zone 1                                |   |   |
|---------------------------------------|---|---|
| <b>Site Context</b>                   |   |   |
| Area                                  | <ul style="list-style-type: none"> <li>22,080 m<sup>2</sup> (2.21 Ha)</li> </ul>  |   |
| Location / Character                  | <ul style="list-style-type: none"> <li>A core block of vegetation that encompasses Macpherson Creek and is flanked by Cape Liptrap Coastal Park to the west, and Bayside Drive to the east.</li> <li>The zone, which largely comprises of remnant vegetation, supports a range of forest and woodland types that include a number of regionally significant EVCs, and has a relatively low cover of priority weeds.</li> </ul>                                      |   |
| Cultural Heritage Features            | <ul style="list-style-type: none"> <li>Incorporates an old house site and plantings such as Fig Tree</li> </ul>   |   |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>High Quality Environmental</li> <li>Moderate Quality Environmental</li> </ul>  |   |
| <b>Synopsis of Values and Threats</b> |   |   |
| Ecological Vegetation Classes         | <ul style="list-style-type: none"> <li>Coastal Headland Scrub (South Gippsland) (EVC 161)</li> <li>Coastal Headland Scrub (Walkerville) (EVC 161)</li> <li>Coast Banksia Woodland (EVC 2)</li> <li>Lowland Forest (EVC 16)</li> <li>Warm temperate Rainforest (syn. Littoral Rainforest) (EVC 32)</li> </ul>  |   |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>A large block of intact remnant vegetation that forms part of a large contiguous habitat link with Cape Liptrap Coastal Park.</li> <li>The zone contains significant patches of Warm Temperate Rainforest which is locally uncommon; these lay adjacent to Macpherson Creek.</li> </ul>  |   |
| Threatened and Significant Flora      | <ul style="list-style-type: none"> <li>None recorded, however, suitable habitat for a number of species</li> <li>The zone supports a threatened EVC that is poorly represented in the area</li> </ul>   |   |
| Threatened and Significant Fauna      | <ul style="list-style-type: none"> <li>Blue-winged Parrot (<i>Neophema chrysostoma</i>)</li> <li>Climbing Galaxia (<i>Galaxias brevipinnis</i>)</li> <li>Gang-gang Cockatoo (<i>Callocephalon fimbriatum</i>)</li> </ul>  | <ul style="list-style-type: none"> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-footed Dunnart (<i>Sminthopsis leucopus</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> </ul> |
|                                       | <ul style="list-style-type: none"> <li>Although not previously recorded accessing the zone, observations suggest there is suitable habitat for Powerful Owl (<i>Ninox strenua</i>) and Burrowing Crayfish (<i>Engaeus</i> spp.).</li> <li>It is also likely that this section of the Foreshore Reserve provides habitat for a number of other threatened fauna species; where these that have gone undetected due the low survey effort across the site.</li> </ul> |   |
| Priority Environmental Weeds          | <ul style="list-style-type: none"> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Hedera hibernica</i> (Atlantic Ivy)</li> <li>*<i>Ilex aquifolium</i> (English Holly)</li> </ul>   | <ul style="list-style-type: none"> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> <li>*<i>Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul>                       |
| Pest Animals                          | <ul style="list-style-type: none"> <li>Deer, foxes and rabbits</li> </ul>   |   |

**Threatened and Significant Flora**

Zone 1 supports a local variation of Warm Temperate Rainforest which is restricted to a small handful of creeklines within the area surrounding the Foreshore Reserve. While individual taxa within the community do not have conservation listings (e.g. the EPBC Act 1999 or FFG Act 1988), the community includes a number of species that are not typical of such low-lying areas close to the coast.

**Threatened and Significant Fauna**

A range of rare and threatened fauna have been recorded more broadly across the Northern Management Unit and within the immediate surrounds of the Foreshore Reserve. Akin to the other zones in the Management Unit, the diversity of habitats provided by Zone 3 suggests that a subset of these could utilise the site, and it is probable that additional surveys would lead to the detection of a range of additional taxa. Climbing Galaxia (*Galaxias brevipinnis*), for example, were observed in Macpherson Creek during the October – December 2023 surveys.



### Vegetation Description by Condition Class

Vegetation in Zone 1 was assigned to two condition classes; namely *High Quality Environmental* and *Moderate Quality Environmental*. A description of the composition and condition of these classes, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 1 during the October – December site visits is provided in Section 7.3.2.7. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

#### High Quality Environmental Condition Class

##### Composition and Condition

The majority of Zone 1 has been assigned to this condition class. This part of the zone abuts Cape Liptrap Coastal Park and therefore provides for the continuous passage of fauna to the west of the Foreshore Reserve. It is also floristically and structurally diverse and supports a range of EVCs.

##### Environmental Weeds

Overall, key taxa that should be targeted for active control include *\*Delairea odorata* (Cape Ivy), *\*Hedera hibernica* (Atlantic Ivy), *\*Ilex aquifolium* (English Holly), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Rubus anglocandicans* (Common Blackberry) and *\*Zantedeschia aethiopica* (White Arum-lily).

The core focus of efforts in this area should be to impede further weed incursion, and to ensure that (primarily) the extent and cover of woody weeds is reduced; where, ideally, this would mean that no mature plants set seed, and that there is no further growth of elevated climbers. Actively managing the stands of *\*Delairea odorata* (Cape Ivy) and *\*Hedera hibernica* (Atlantic Ivy) along the boundaries of the zone, and along the boundary of Cape Liptrap Coastal Park, is a high priority; with the objective of intervention being to help prevent the further spread of weeds into this core block of remnant vegetation. *#Pittosporum undulatum* (Sweet Pittosporum) will also require targeted management to prevent the taxon from dominating any one area, as will *\*Rubus anglocandicans* (Common Blackberry), which occurs at relatively low levels and predominately within sections where there is increased light.

Due to the local significance placed on other *\*Ficus carica* (Fig) in the Walkerville South area (see Significant trees of South Gippsland), it is recommended that the recorded individuals of this taxon not be treated. This approach is feasible as *\*Ficus carica* (Fig) do not readily naturalise, and are therefore unlikely to become a management issue more widely.

#### Moderate Quality Environmental

##### Composition and Condition

Two small patches in Zone 1 were assigned to this condition class; they encompass Macpherson Creek, and a section of the northern boundary that abuts private land. These patches were considered lower quality due to the higher proportion of environmental weeds and disturbance to vegetation structure including around the old house site.

##### Environmental Weeds

Overall, key taxa that should be targeted for active control include *\*Delairea odorata* (Cape Ivy), *\*Hedera hibernica* (Atlantic Ivy), *\*Ilex aquifolium* (English Holly), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Rubus anglocandicans* (Common Blackberry) and *\*Zantedeschia aethiopica* (White Arum-lily).



Akin to areas mapped as High Quality, the core focus of efforts in this area should be to impede further weed incursion, and to ensure that (primarily) the extent and cover of woody weeds is reduced; where, ideally, this would mean that no mature plants set seed, and that there is no further growth of elevated climbers. Actively managing the stands of *\*Delairea odorata* (Cape Ivy), *\*Hedera hibernica* (Atlantic Ivy) and *\*Zantedeschia aethiopica* (White Arum-lily) along the creekline are a high priority; with the objective of intervention being to help prevent the further spread of weeds into this core block of remnant vegetation. *#Pittosporum undulatum* (Sweet Pittosporum) will also require targeted management to prevent the taxon from dominating any one area, as will *\*Rubus anglocandicans* (Common Blackberry), which occurs at relatively low levels and predominately within sections where there is increased light.

#### Other Management Concerns / Provisions

The new house that was constructed on the northern boundary of Zone 1 has storm water run-off points into the reserve; as well as constructed swale that has resulted in vegetation clearance. One of the pipes is above a steep section to the waterway which may lead to erosion in the future. Additionally, the landowners dumping of garden waste into the reserve has the potential to increase weed invasion and nutrient loading, and it is recommended that the Committee investigate options for preventing further activity.

#### 7.3.2.3 Zone 2

| Zone 2  |   |   |  |
|---|---|---|--|
| Site Context  |   |   |  |
| Area  | <ul style="list-style-type: none"> <li>3,565 m<sup>2</sup> (0.36 Ha)</li> </ul>   |   |  |
| Location / Character  | <ul style="list-style-type: none"> <li>A narrow linear band of vegetation between Bayside Drive and the beach; the northern extent of the zone approximately aligns with Waratah Street, while the southern extent approximately aligns with Macpherson Creek.</li> <li>The zone principally comprises of remnant native vegetation with a relatively low cover of weeds, however, the structure of vegetation has been modified, and species richness is lower than typical of the constituent EVCs.</li> </ul>        |   |  |
| Social and Amenity Features   | <ul style="list-style-type: none"> <li>Bayside Drive and informal access points to the beach</li> </ul>   |   |  |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>Moderate Quality Environmental – High Amenity</li> </ul>   |   |  |
| Synopsis of Values and Threats  |   |   |  |
| Ecological Vegetation Classes   | <ul style="list-style-type: none"> <li>Coast Banksia Woodland (EVC 2)</li> <li>Coastal Dune Scrub (EVC 160)</li> </ul>  |   |  |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>A linear strip of vegetation between Bayside Drive and the foreshore.</li> <li>The area is prone to coastal erosion with some sections less than 5 metres wide.</li> </ul>   |   |  |
| Threatened and Significant Flora  | <ul style="list-style-type: none"> <li>None recorded</li> </ul>   |   |  |
| Threatened and Significant Fauna  | <table border="0"> <tr> <td> <ul style="list-style-type: none"> <li>Common sandpiper (<i>Actitis hypoleucos</i>)</li> <li>Hooded Plover (<i>Thinornis rubricollis</i>)</li> <li>Pied Oystercatcher (<i>Haematopus longirostris</i>)</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>Sooty Oystercatcher (<i>Haematopus fuliginosus</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> </ul> </td> </tr> </table> | <ul style="list-style-type: none"> <li>Common sandpiper (<i>Actitis hypoleucos</i>)</li> <li>Hooded Plover (<i>Thinornis rubricollis</i>)</li> <li>Pied Oystercatcher (<i>Haematopus longirostris</i>)</li> </ul> | <ul style="list-style-type: none"> <li>Sooty Oystercatcher (<i>Haematopus fuliginosus</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> </ul> |
| <ul style="list-style-type: none"> <li>Common sandpiper (<i>Actitis hypoleucos</i>)</li> <li>Hooded Plover (<i>Thinornis rubricollis</i>)</li> <li>Pied Oystercatcher (<i>Haematopus longirostris</i>)</li> </ul> | <ul style="list-style-type: none"> <li>Sooty Oystercatcher (<i>Haematopus fuliginosus</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> </ul>  |   |  |
| Priority Environmental Weeds  | <table border="0"> <tr> <td> <ul style="list-style-type: none"> <li><i>*Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li><i>*Crassula muscosa</i> var. <i>muscosa</i> (Clubmoss Crassula)</li> </ul> </td> <td> <ul style="list-style-type: none"> <li><i>#Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li><i>*Rubus anglocandicans</i> (Blackberry)</li> <li><i>*Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul> </td> </tr> </table>   | <ul style="list-style-type: none"> <li><i>*Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li><i>*Crassula muscosa</i> var. <i>muscosa</i> (Clubmoss Crassula)</li> </ul>                      | <ul style="list-style-type: none"> <li><i>#Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li><i>*Rubus anglocandicans</i> (Blackberry)</li> <li><i>*Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul>                        |
| <ul style="list-style-type: none"> <li><i>*Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li><i>*Crassula muscosa</i> var. <i>muscosa</i> (Clubmoss Crassula)</li> </ul>                      | <ul style="list-style-type: none"> <li><i>#Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li><i>*Rubus anglocandicans</i> (Blackberry)</li> <li><i>*Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul>   |   |  |
| Pest Animals  | <ul style="list-style-type: none"> <li>Foxes and rabbits</li> </ul>   |   |  |



**Threatened and Significant Fauna**

The beach zone to the rock platforms along the coast provide suitable habitat for a range of threatened avian fauna (e.g. Hooded Plover (*Thinornis cucullatus*)).

**Vegetation Description by Condition Class**

Vegetation in Zone 2 was assigned to a single condition class; namely *Moderate Quality Environmental – High Amenity*. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 1 during the October – December site visits is provided in Section 7.3.2.7. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

**Moderate Quality Environmental – High Amenity Condition Class****Composition and Condition**

Zone 2 lies at the northern extent of the Management Unit and comprises of a narrow linear strip of vegetation that runs proximate to the foreshore and is bound by Bayside Drive to the west. Vegetation within the zone is subject to a range of pressures, with coastal erosion on the ocean side and human / traffic related disturbances along the roadside, and this has resulted in modifications to the structure and floristics. While the wider section of the foreshore reserve can be managed to improve the conservation values, ultimately coastal erosion through this area is likely to require a much high level of management that is beyond the scope of the current plan. In the interim, however, increasing the resilience of vegetation by creating a stable fore-dune environment will aid in the rate at which erosion detrimentally impacts vegetation.

**Environmental Weeds**

Key taxa that should be targeted for active control include *\*Agapanthus praecox* subsp. *orientalis* (Agapanthus), *\*Crassula muscosa* var. *muscosa* (Clubmoss Crassula), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Rubus anglocandicans* (Common Blackberry) and *\*Zantedeschia aethiopica* (White Arum-lily).

As the degree of weed invasion across the zone is varied, the most efficacious strategy is likely to involve first targeting those taxa that currently have relatively restricted distributions or those that will be more troublesome to manage should they expand further. These include:

- *\*Agapanthus praecox* subsp. *orientalis* (Agapanthus) and *\*Zantedeschia aethiopica* (White Arum-lily), which are relatively slow-moving species but are difficult to manage once established. Given the low number of infestations, extant populations are a high priority for treatment;
- Climbers and scramblers such as *\*Rubus anglocandicans* (Common Blackberry); and
- Isolated *#Pittosporum undulatum* (Sweet Pittosporum).

**Other Management Concerns / Provisions**

Given the narrow width of the foreshore reserve across this part of the site, people accessing the beach by informal means is inevitable. Of greater concern, however, is vehicles parking adjacent to the road and incrementally encroaching on vegetation that is already very prone to erosion.



## 7.3.2.4 Zone 3

| Zone 3                                |  |
|---------------------------------------|--|
| <b>Site Context</b>                   |  |
| Area                                  | <ul style="list-style-type: none"> <li>1,970 m<sup>2</sup> (0.20 Ha)</li> </ul>  |
| Location / Character                  | <ul style="list-style-type: none"> <li>Area adjacent to the Walkerville North Boat Ramp and the extension of Bayside Drive at the southern end of the Management Unit.</li> <li>Some remnant native vegetation persists, although it has high cover of problematic environmental weeds.</li> <li>Vegetation was typically characterised by modified structure and lower than typical species diversity for the constituent EVC.</li> </ul>                     |
| Social and Amenity Features           | <ul style="list-style-type: none"> <li>Walkerville North Boat Ramp</li> </ul>  |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>Moderate Quality Environmental – High Amenity</li> </ul>  |
| <b>Synopsis of Values and Threats</b> |  |
| Ecological Vegetation Classes         | <ul style="list-style-type: none"> <li>Coastal Dune Scrub (EVC 160)</li> </ul>   |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>Linear strip of vegetation between Bayside Drive and the foreshore.</li> </ul>  |
| Threatened and Significant Flora      | <ul style="list-style-type: none"> <li>None recorded</li> </ul>  |
| Threatened and Significant Fauna      | <ul style="list-style-type: none"> <li>Common sandpiper (<i>Actitis hypoleucos</i>)</li> <li>Hooded Plover (<i>Thinornis rubricollis</i>)</li> <li>Pied Oystercatcher (<i>Haematopus longirostris</i>)</li> <li>Sooty Oystercatcher (<i>Haematopus fuliginosus</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> </ul>  |
| Priority Environmental Weeds          | <ul style="list-style-type: none"> <li>*<i>Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li>*<i>Coprosma repens</i> (Mirror bush)</li> <li>*<i>Crocsmia X crocosmiiflora</i> (Montbretia)</li> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Hebe</i> spp. (Hebe)</li> <li>*<i>Hedera hibernica</i> (Atlantic Ivy)</li> <li>*<i>Kniphofia uvaria</i> (Red-hot Poker)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> </ul> |
| Pest Animals                          | <ul style="list-style-type: none"> <li>Foxes and rabbits</li> </ul>  |

**Threatened and Significant Fauna**

Akin to Zone 2, in Zone 3, the beach zone to the rock platforms along the coast provide suitable habitat for a range of threatened avian fauna (e.g. Hooded Plover (*Thinornis cucullatus*)).

**Vegetation Description by Condition Class**

Vegetation in Zone 3 was assigned to a single condition class; namely *Moderate Quality Environmental – High Amenity*. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 3 during the October – December site visits is provided in Section 7.3.2.7. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

**Moderate Quality Environmental – High Amenity Condition Class****Composition and Condition**

Zone 3 comprises of a narrow linear strip of vegetation that lies at the southern extent of the Management Unit, south of Holt Street. The zone runs proximate to the foreshore, and is bound by the Walkerville North Boat Ramp to the north, and Bayside Drive (and its extension) to the west. Vegetation within the zone retains some structure, however, is subject to a range of pressures, with coastal erosion on the ocean side and human / traffic related disturbances along the roadside. There is also a diverse weed flora, in addition the pressure from horticultural plantings along the upper edge of



the zone which include *\*Agapanthus praecox* (Agapanthus) and *\*Kniphofia uvaria* (Red Hot Poker). Vegetation within the zone has also been managed to maintain view lines from neighbouring properties.

#### Environmental Weeds

Key taxa that should be targeted for active control include *\*Agapanthus praecox* subsp. *orientalis* (Agapanthus), *\*Coprosma repens* (Mirror Bush), *\*Crocasmia X crocosmiiflora* (Montbretia), *\*Delairea odorata* (Cape Ivy), *\*Hebe* spp. (Hebe), *\*Hedera hibernica* (Atlantic Ivy), *\*Kniphofia uvaria* (Red-hot Poker) and *\*Rubus anglocandicans* (Common Blackberry).

Given the diversity of weeds across the zone, including several taxa that are difficult to control, it is recommended that works across the zone focus on limiting the spread of existing weeds. This will include:

- Preventing the aerial growth of climbers and scramblers such as *\*Delairea odorata* (Cape Ivy), *\*Hedera hibernica* (Atlantic Ivy) and *\*Rubus anglocandicans* (Common Blackberry), and limiting their further spread; and
- Actively controlling *\*Agapanthus praecox* subsp. *orientalis* (Agapanthus), *\*Kniphofia uvaria* (Red Hot Poker) and *\*Zantedeschia aethiopica* (White Arum-lily), which are relatively slow-moving species but are difficult to manage once established.

#### Other Management Concerns / Provisions

With respect to 'expectations' regarding management of the Foreshore Reserve, it is recommended that the Committee continue to work with neighbouring land owners, particularly with regards to the appropriateness of plantings along the roadside verge. It is imperative that selected plants do not spread and become a management issue elsewhere in the Foreshore Reserve.

Although beyond the purview of the current plan, it is noted that periodic clearance of vegetation around the access points to the boat ramp will be necessary.

#### 7.3.2.5 Zone 4

| Zone 4                                |  |
|---------------------------------------|--|
| <b>Site Context</b>                   |  |
| Area                                  | <ul style="list-style-type: none"> <li>• 3,400 m<sup>2</sup> (0.34 Ha)</li> </ul>  |
| Location / Character                  | <ul style="list-style-type: none"> <li>• Area of rock beaching alongside Bayside Drive; the zone runs from approximately south of Macpherson Creek to just south of the Walkerville North Boat Ramp.</li> <li>• Patchy revegetation works following the installation of rock.</li> </ul> |
| Social and Amenity Features           | <ul style="list-style-type: none"> <li>• Walking track alongside the road and formal (stepped) access points to the beach</li> </ul>   |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>• Low Quality Environmental – High Amenity</li> </ul>   |
| <b>Synopsis of Values and Threats</b> |  |
| Ecological Vegetation Classes         | <ul style="list-style-type: none"> <li>• Coastal Dune Scrub (EVC 160) (modified)</li> </ul>  |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>• Linear strip of vegetation between Bayside Drive and the foreshore</li> </ul>   |
| Threatened and Significant Flora      | <ul style="list-style-type: none"> <li>• None recorded</li> </ul>  |
| Threatened and Significant Fauna      | <ul style="list-style-type: none"> <li>• None recorded</li> </ul>  |
| Priority Environmental Weeds          | <ul style="list-style-type: none"> <li>• <i>*Cortaderia selloana</i> subsp. <i>selloana</i> (Pampas Grass)</li> </ul>  |



**Vegetation Description by Condition Class**

Vegetation in Zone 4 was assigned to a single condition class; namely *Low Quality Environmental – High Amenity*. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 4 during the October – December site visits is provided in Section 7.3.2.7. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

**Low Quality Environmental – High Amenity****Composition and Condition**

Zone 4 has little to no persisting remnant vegetation, rather it principally comprises of the rock beaching / stabilisation works, which have altered the character of the landscape. Given proximity to the boat ramp, toilet facilities and the public hall, the zone is considered to have high amenity value. The management focus on this section should therefore be site appropriate revegetation, and weed management that will soften the rock beaching while maintaining sight lines along the bay.

**Environmental Weeds**

Given the recent earth works through this area, most weeds are limited to opportunistic herbs and grasses that will only require management during the revegetation phase. There are, however, isolated plants of *\*Cortaderia selloana* subsp. *selloana* (Pampas Grass) that should be targeted for control.

**Revegetation / Natural Regeneration / Species Enrichment Plantings**

As this area has been significantly modified, it is recommended that site appropriate revegetation be undertaken to soften the rock beaching. Appropriate species include low-growing sedges, grasses and shrubs such as *Ficinia nodosa* (Knobby Club-sedge), *Poa poiformis* (Coastal Tussock-grass), *Austrostipa stipoides* (Prickly Spear-grass), *Rhagodia candolleana* (Sea-berry Salt-bush), *Atriplex cinerea* (Coast Saltbush), *Correa alba* (White Correa) and *Adriana quadripartite* (Coast Bitter-bush). Due the high level of pedestrian usage, coupled with current openness of the site, it is recommended that plantings be high density (e.g. 3 plants per m<sup>2</sup>).

**Other Management Concerns / Provisions**

Although beyond the purview of the current plan, it is noted that periodic vegetation clearance will be required to maintain clear access along the walking paths.

## 7.3.2.6 Zone 5

| Zone 5                                |   |   |
|---------------------------------------|---|---|
| <b>Site Context</b>                   |   |   |
| Area                                  | <ul style="list-style-type: none"> <li>1,985 m<sup>2</sup> (0.20 Ha)</li> </ul>   |   |
| Location / Character                  | <ul style="list-style-type: none"> <li>A small block of vegetation to the west of Bayside Drive, that is bordered by Bayside Drive to the east and flanked by private properties in Waratah Street to the west.</li> </ul>  |   |
| Social and Amenity Features           | <ul style="list-style-type: none"> <li>Informal walking tracks from private properties to the beach</li> </ul>  |   |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>Moderate Quality Environmental – High Amenity</li> </ul>   |   |
| <b>Synopsis of Values and Threats</b> |   |   |
| Ecological Vegetation Classes         | <ul style="list-style-type: none"> <li>Coastal Dune Scrub (EVC 160)</li> <li>Coastal Headland Scrub (South Gippsland) (EVC 161)</li> </ul>  |   |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>Linear strip of vegetation between Bayside Drive and the private properties including steep sections.</li> <li>Vegetation is structurally intact in areas, however, has a high proportion of weed including scramblers and climbers.</li> <li>Some sections of the zone are currently being managed by neighbouring landowners.</li> </ul> |   |
| Threatened and Significant Flora      | <ul style="list-style-type: none"> <li>None recorded</li> </ul>   |   |
| Threatened and Significant Fauna      | <ul style="list-style-type: none"> <li>None recorded</li> </ul>   |   |
| Priority Environmental Weeds          | <ul style="list-style-type: none"> <li>*<i>Hedera hibernica</i> (Atlantic Ivy)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> </ul>  | <ul style="list-style-type: none"> <li>*<i>Vinca major</i> (Blue Periwinkle)</li> </ul> |

**Vegetation Description by Condition Class**

Vegetation in Zone 5 was assigned to a single condition class; namely *Moderate Quality Environmental – High Amenity*. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 5 during the October – December site visits is provided in Section 7.3.2.7. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

**Moderate Quality Environmental – High Amenity Condition Class****Composition and Condition**

Vegetation across Zone 5 is structurally intact in areas, however, has a high cover of weeds including scramblers and climbers. It has variously been subject to management intervention by neighbouring property owners.

**Environmental Weeds**

Key taxa that occur across the zone include \**Hedera hibernica* (Atlantic Ivy), \**Rubus anglocandicans* (Common Blackberry) and \**Vinca major* (Blue Periwinkle). Saliently, before widespread weed control is undertaken across the zone, it is recommended that the bank slumping be investigated. Prior to appropriate investigations, weed control should be limited to the southern boundary of the zone.

**Other Management Concerns / Provisions**

Although beyond the purview of the current plan, there was evidence that parts of the zone had been subject to land slippages, with indications that some remediation works had been undertaken. There were also sections that appeared to have been disturbed more recently. Until investigations are completed by appropriate professionals, it is recommended that all vegetation be left *in situ*.



## 7.3.2.7 Inventory of Priority Weeds and Thematic Map Series

An inventory of the priority weeds mapped within the Central Management Unit, by zone, during the October – December site visits is provided in Table 15. Maps that depict the diversity of the recorded weed flora are provided in Figure 47 to Figure 50 (page 101 to page 104). The first set of maps portrays the richness of herbs, graminoids and scramblers; both by species, and by species with reference to the underlying management zone. The second set of maps portrays the richness of trees and shrubs; by species, and by species with reference to the underlying management zone. The age class and abundance of several of the more populous weeds across the unit (e.g. *\*Delairea odorata* (Cape Ivy), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Rubus anglocandicans* (Common Blackberry) and *\*Zantedeschia aethiopica* (White Arum-lily)) is depicted in Figure 51 to Figure 53 (page 105 to page 107).

Table 15 Life form and bioregional status of priority environmental weeds recorded by zone, Central Management Unit, Walkerville Foreshore Reserve, October – December 2023

| Scientific Name                                    | Common Name       | Life Form                        | Bioregional Status         |                               |                                      | Presence by Zone |        |        |        |        | Population Notes  |
|--|-------------------|----------------------------------|----------------------------|-------------------------------|--------------------------------------|------------------|--------|--------|--------|--------|---|
|  |                   |                                  | CaLP Act 1994              | Weed on National Significance | Victorian Weed Advisory Risk Ranking | Zone 1           | Zone 2 | Zone 3 | Zone 4 | Zone 5 |   |
| <b>Graminoids</b>                                  |                   |                                  |                            |                               |                                      |                  |        |        |        |        |   |
| <i>Cortaderia selloana</i> subsp. <i>selloana</i>  | Pampas Grass      | Large tufted graminoid           | -                          | -                             | High Risk                            |                  |        |        | yes    |        | Small population  |
| <i>Crocsmia X crocosmiiflora</i>                   | Montbretia        | Medium to small tufted graminoid | -                          | -                             | Very High Risk                       |                  |        | yes    |        |        | -   |
| <b>Herbs</b>                                       |                   |                                  |                            |                               |                                      |                  |        |        |        |        |   |
| <i>Agapanthus praecox</i> subsp. <i>orientalis</i> | Agapanthus        | Large herb                       | -                          | -                             | Very High Risk                       |                  | yes    | yes    |        |        | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.                                 |
| <i>Crassula muscosa</i> var. <i>muscosa</i>        | Clubmoss Crassula | Medium herb                      | -                          | -                             | High Risk                            |                  | yes    |        |        |        | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.                                 |
| <i>Kniphofia uvaria</i>                            | Red-hot Poker     | Large herb                       | -                          | -                             | High Risk                            |                  |        | yes    |        |        | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.                                 |
| <i>Zantedeschia aethiopica</i>                     | White Arum-lily   | Large herb                       | -                          | -                             | Very High Risk                       | yes              | yes    |        |        |        | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.                                 |
| <b>Scramblers and Climbers</b>                     |                   |                                  |                            |                               |                                      |                  |        |        |        |        |   |
| <i>Delairea odorata</i>                            | Cape Ivy          | Scrambler or climber             | -                          | -                             | Very High Risk                       | yes              |        | yes    |        |        | Species difficult to eradicate, will require ongoing management and follow-up to prevent the species spreading elsewhere within the zone. |
| <i>Hedera hibernica</i>                            | Atlantic Ivy      | Scrambler or climber             | -                          | -                             | Very High Risk                       | yes              |        | yes    |        | yes    | Species currently restricted within zone and eradication of mature plants possible. Ongoing follow up will be required.                   |
| <i>Rubus anglocandicans</i>                        | Common Blackberry | Scrambler or climber             | Regionally Controlled Weed | YES                           | High Risk                            | yes              | yes    | yes    |        | yes    | Species currently restricted within zone and eradication of mature plants possible. Ongoing follow-up will be required.                   |
| <i>Vinca major</i>                                 | Blue Periwinkle   | Scrambler or climber             | -                          | -                             | High Risk                            |                  |        |        |        | yes    | Species largely in the more degraded areas, contain populations here  |
| <b>Small and Medium Shrubs</b>                     |                   |                                  |                            |                               |                                      |                  |        |        |        |        |   |
| <i>Coprosma repens</i>                             | Mirror Bush       | Medium shrub                     | -                          | -                             | Very High Risk                       |                  |        | yes    |        |        | Species is currently localised but high priority due to the ability for the species to spread widely.                                     |
| <i>Hebe spp.</i>                                   | Hebe              | Small shrub                      | -                          | -                             | -                                    |                  |        | yes    |        |        | Planted specimens   |
| <b>Trees and Large Shrubs</b>                      |                   |                                  |                            |                               |                                      |                  |        |        |        |        |   |
| <i>Ficus carica</i>                                | Fig               | Tree or large shrub              | -                          | -                             | High Risk                            | yes              |        |        |        |        | Planted specimens that may be of historic value   |
| <i>Ilex aquifolium</i>                             | English Holly     | Tree or large shrub              | -                          | -                             | Very High Risk                       | yes              |        |        |        |        | Small number of plants recorded   |
| <i>Pittosporum undulatum</i>                       | Sweet Pittosporum | Tree or large shrub              | -                          | -                             | Very High Risk                       | yes              | yes    |        |        |        | Widespread at low density, target high quality areas first.   |



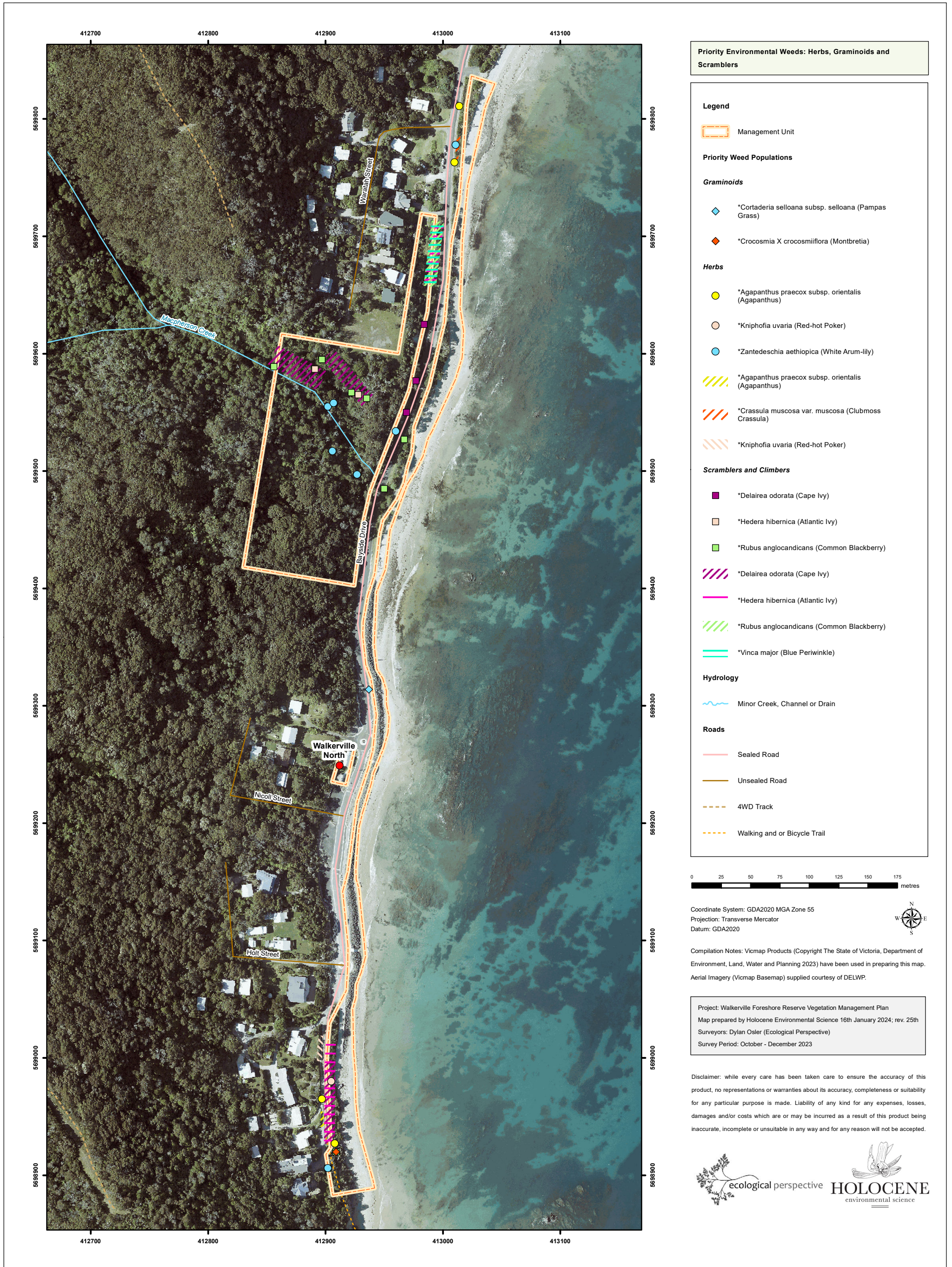


Figure 47 Priority environmental weeds by life form (herbs, graminoids and scramblers), Central Management Unit, Walkerville Foreshore Reserve, October – December 2023



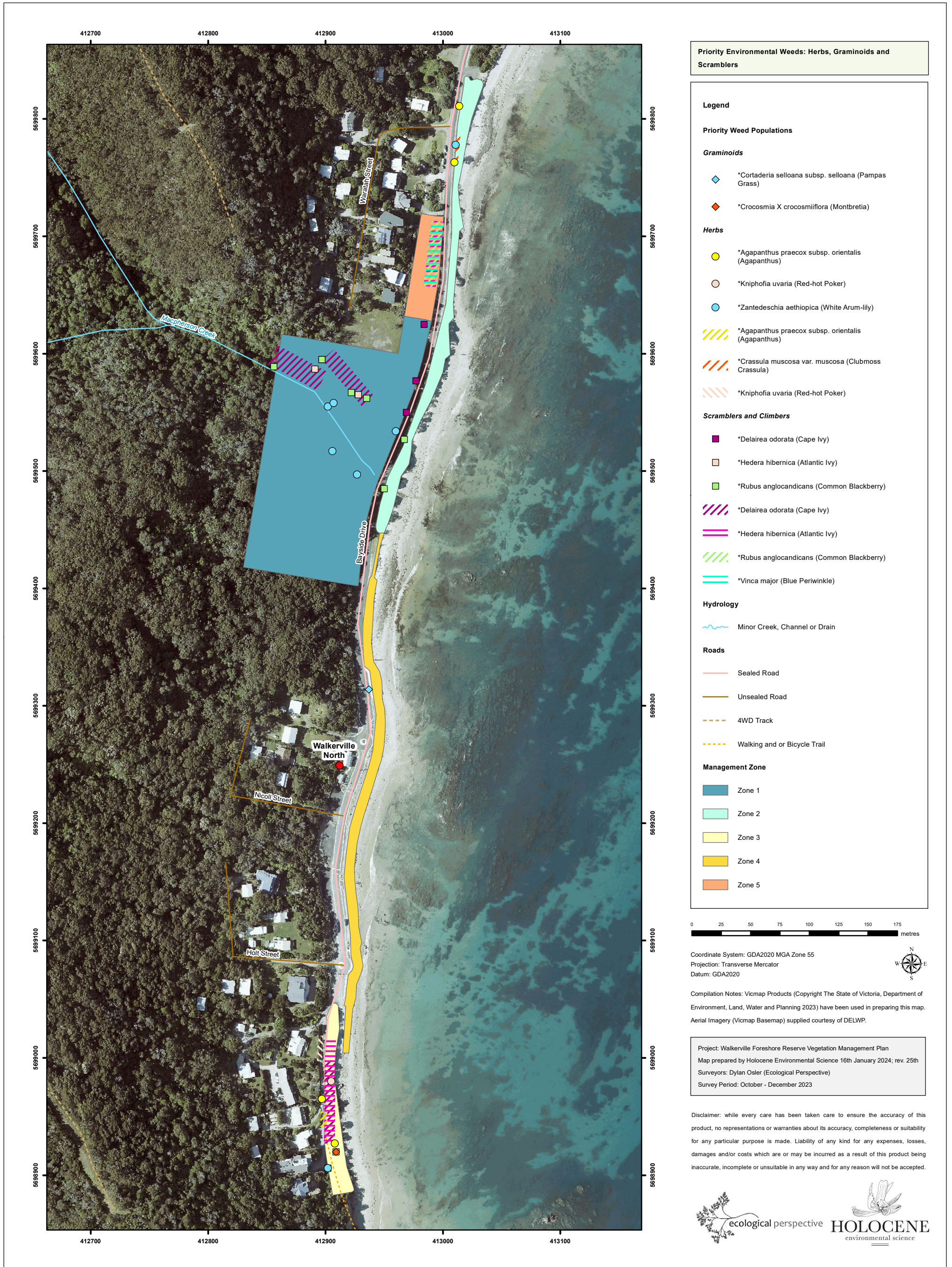


Figure 48 Priority environmental weeds by life form (herbs, graminoids and scramblers), Central Management Unit, Walkerville Foreshore Reserve, October – December 2023



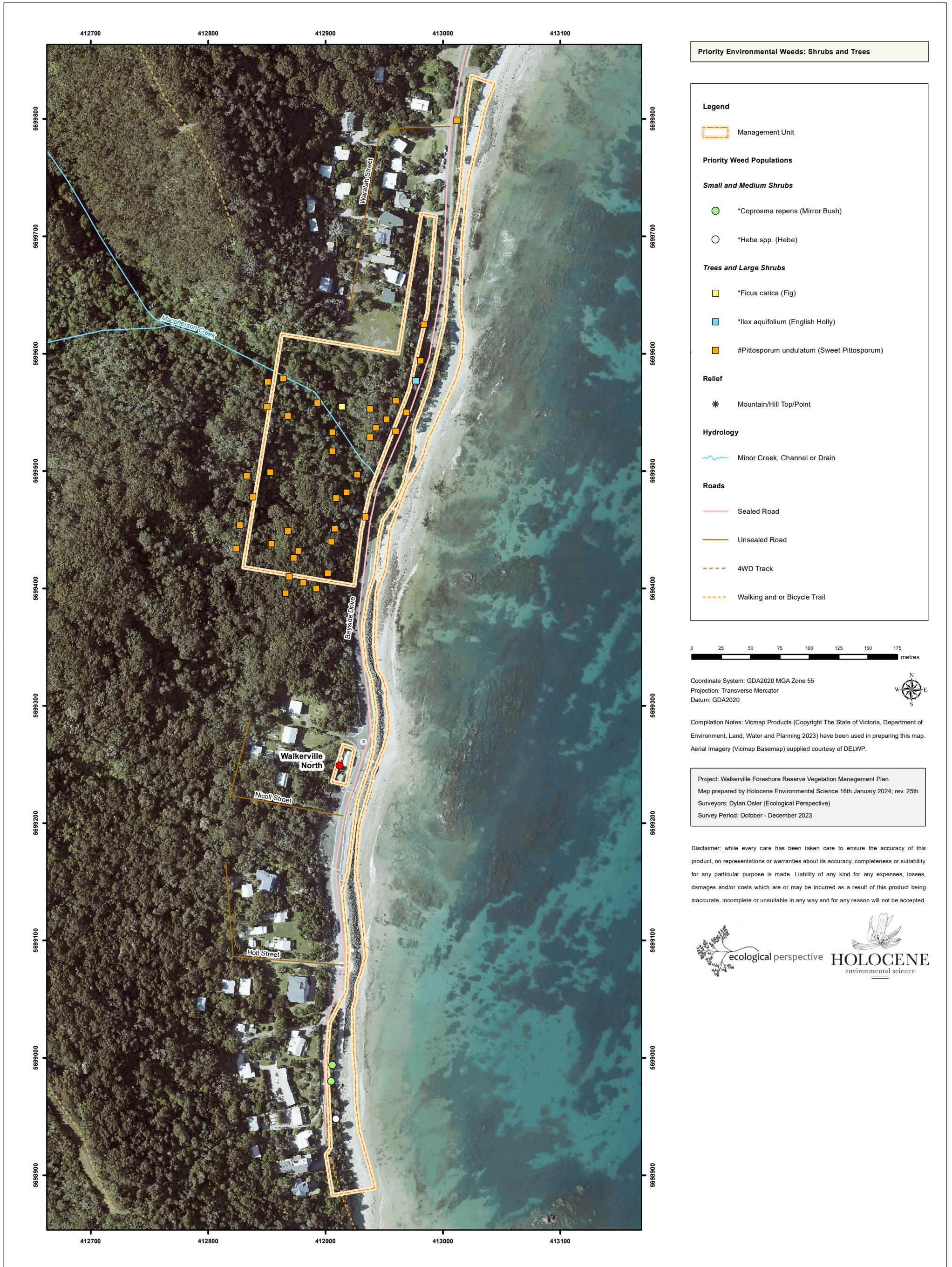


Figure 49 Priority environmental weeds by life form (shrubs and trees), Central Management Unit, Walkerville Foreshore Reserve, October – December 2023



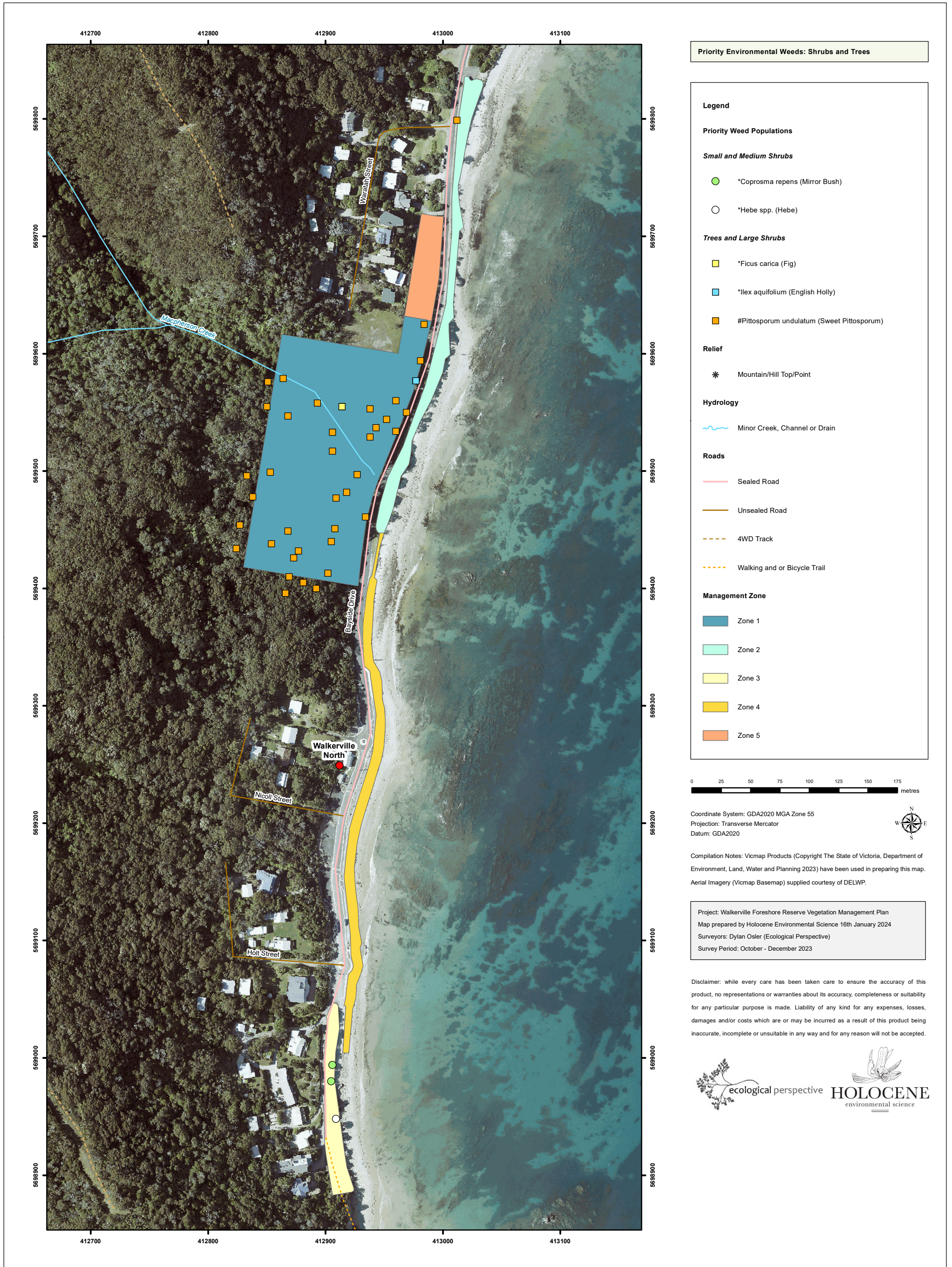


Figure 50 Priority environmental weeds by life form (shrubs and trees) and zone, Central Management Unit, Walkerville Foreshore Reserve, October – December 2023



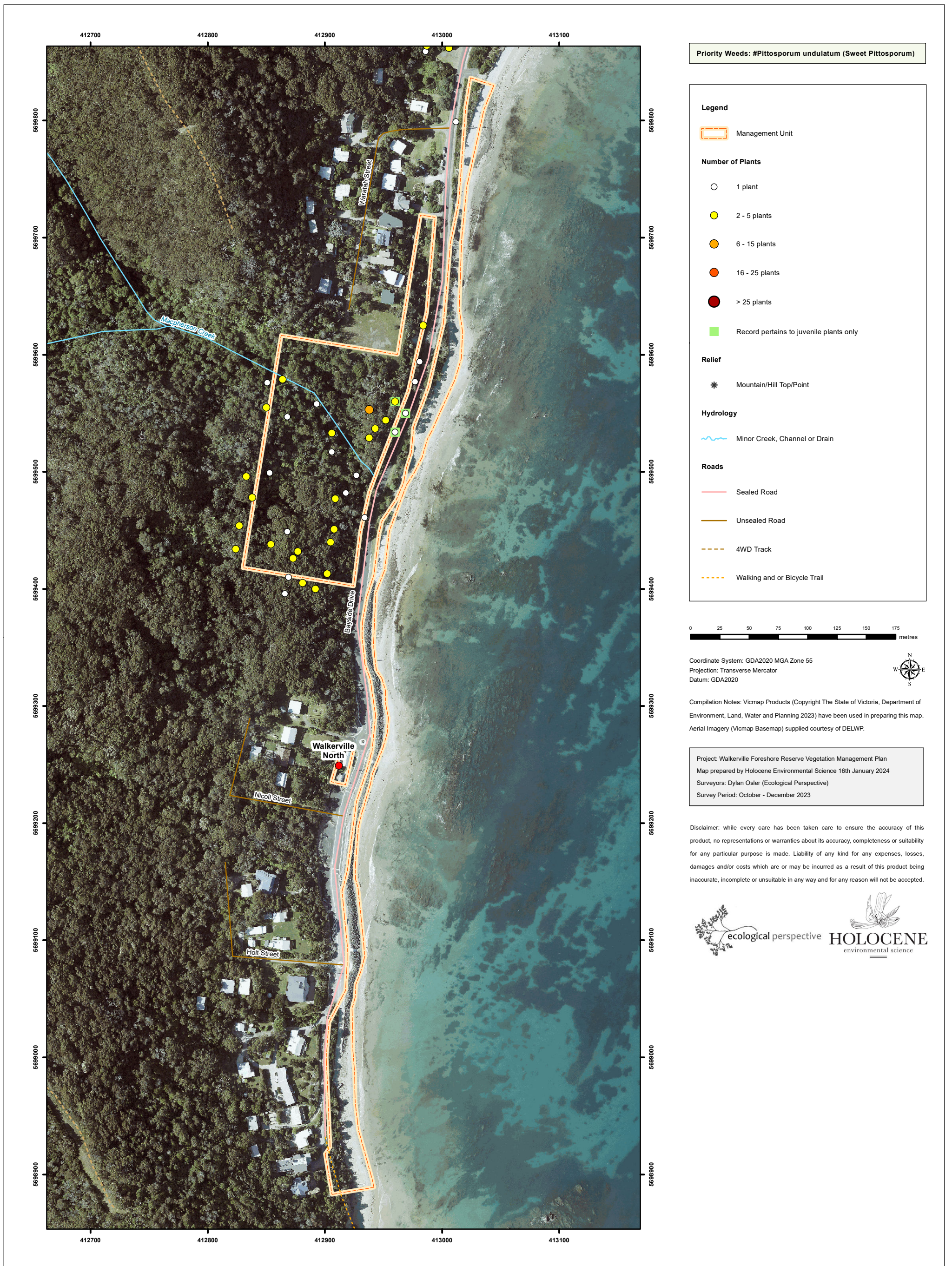


Figure 51 Extent and abundance of #Pittosporum undulatum (Sweet Pittosporum), Central Management Unit, Walkerville Foreshore Reserve, October – December 2023



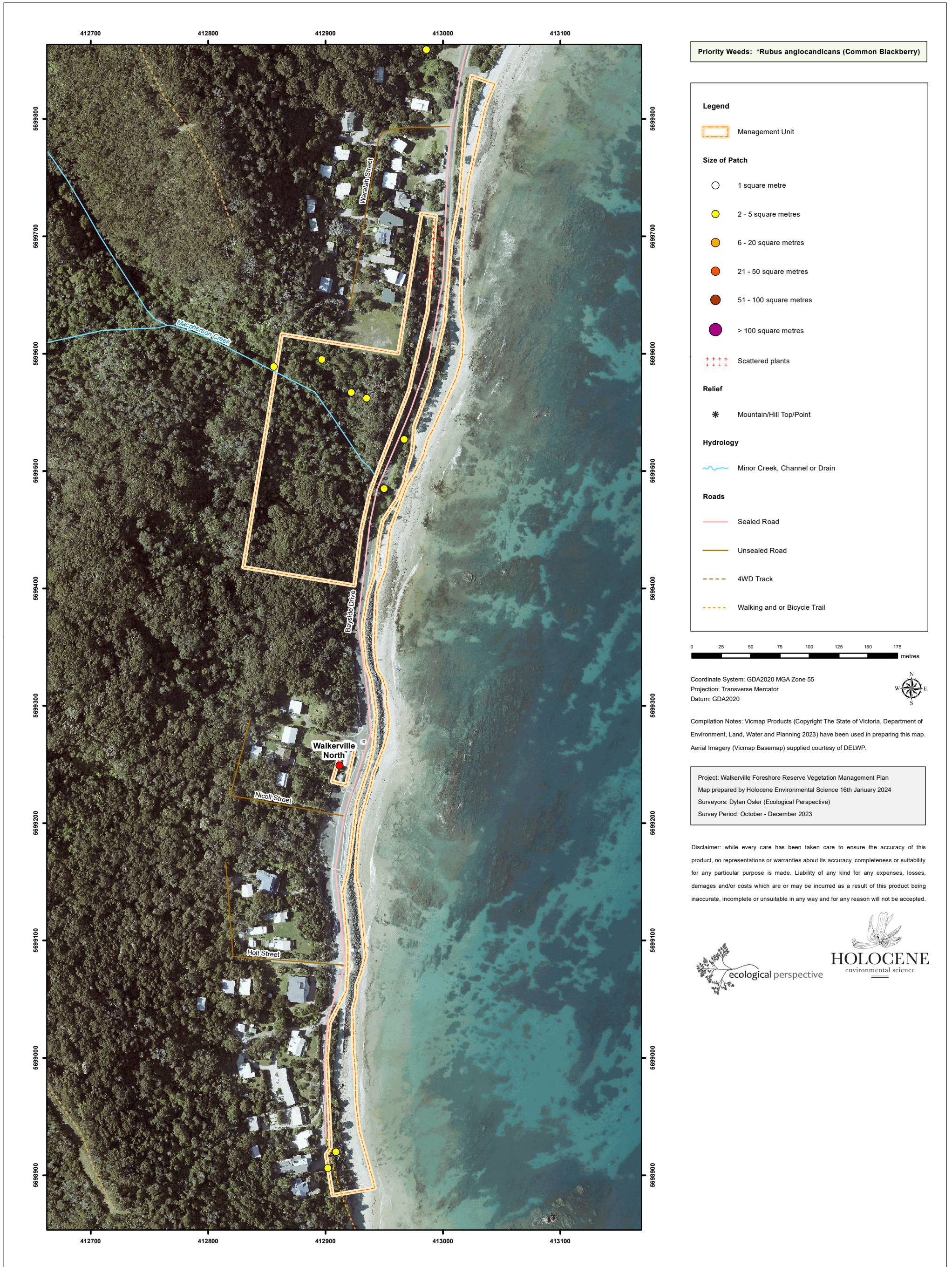


Figure 52 Extent and abundance of \*Rubus anglocandicans (Common Blackberry), Central Management Unit, Walkerville Foreshore Reserve, October – December 2023



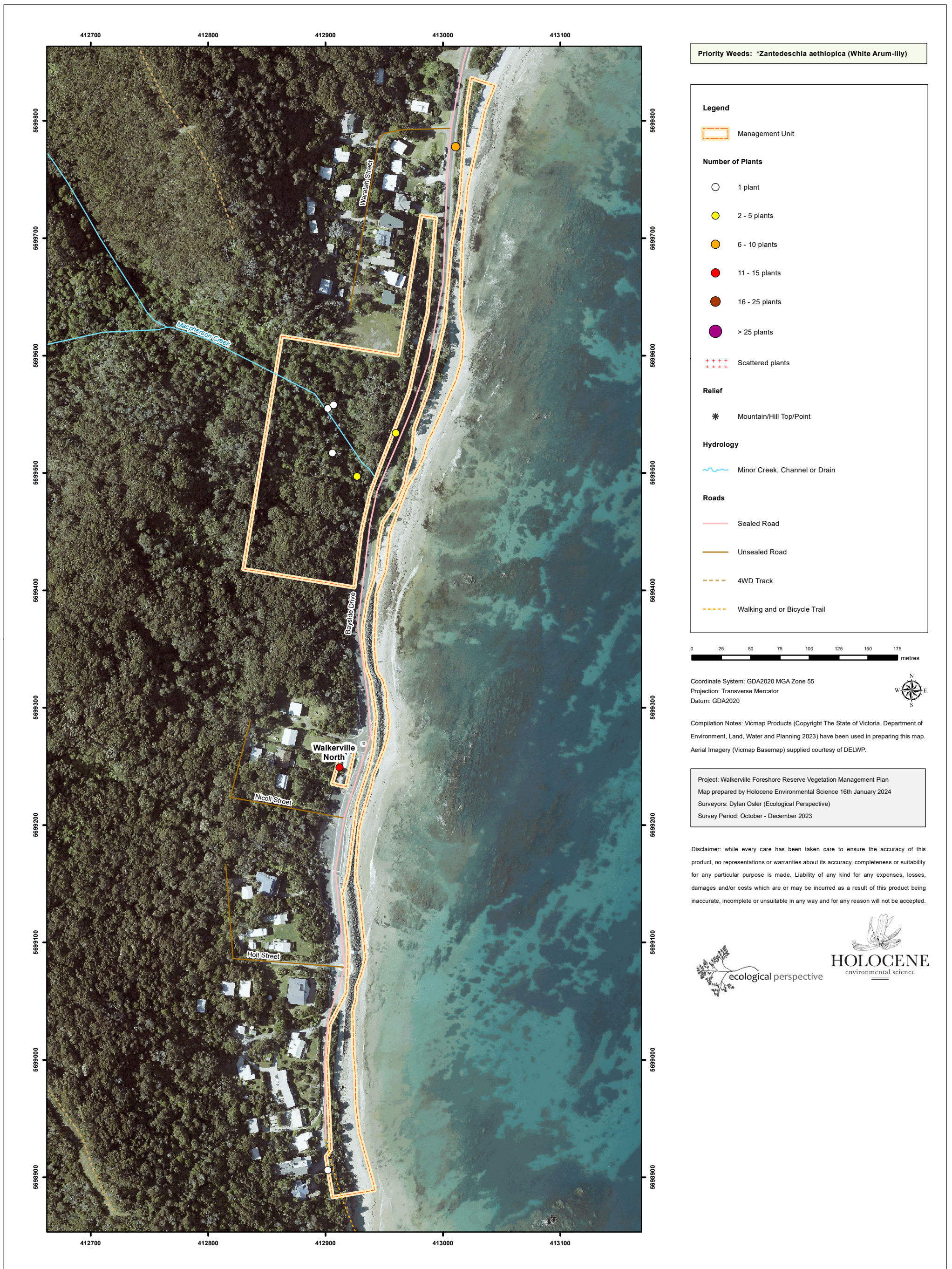


Figure 53 Extent and abundance of \*Zantedeschia aethiopica (White Arum-lily), Central Management Unit, Walkerville Foreshore Reserve, October – December 2023



7.3.2.8 Summary of Proposed Works by Year and Zone

Weed management actions that are proposed for the Central Management Unit are itemised in Table 16. An action is given for each of the priority weeds/overabundant flora that were recorded during the 2023 surveys, and an overall *strategy* has been assigned (e.g. eradicate, control or contain) for each taxon, as well as appropriate *treatment methods*. Reference is also made to the *zone* where works should occur, the *sequencing of works* (i.e. whether they should be undertaken in Year 1 to Year 5), and the appropriate *frequency* and *timing* of each action. Should it not be possible to complete all proposed actions in each Year, then consideration should be given to the *priority* assigned to each action, and high priority actions completed ahead of medium and low priority actions. Sequencing is provided for Year 1 – Year 5, as well as an ongoing maintenance period.

Table 16 Summary of proposed weed management actions by year and zone, Central Management Unit, Walkerville Foreshore Reserve

| Scientific Name                                    | Common Name       | Strategy  | Target   | Treatment Method  | Priority | Action   | Frequency        | Timing        | Year 1          | Year 2             | Year 3          | Year 4          | Year 5    | Ongoing Maintenance Period |
|--|-------------------|-----------|--|---|----------|--|------------------|---------------|-----------------|--------------------|-----------------|-----------------|-----------|----------------------------|
| <b>Graminoids</b>                                  |                   |           |  |   |          |  |                  |               |                 |                    |                 |                 |           |                            |
| <i>Cortaderia selloana</i> subsp. <i>selloana</i>  | Pampas Grass      | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | High     | Actively control all plants across the zone  | Once per year    | At any time   | Zone 4          | Zone 4 (follow-up) |                 |                 |           |                            |
| <i>Crococsmia X crocosmiiflora</i>                 | Montbretia        | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | High     | Actively control all plants across the zone  | Once per year    | At any time   | Zone 3          | Zone 3             | Zone 3          | Zone 3          |           |                            |
| <b>Herbs</b>                                       |                   |           |  |   |          |  |                  |               |                 |                    |                 |                 |           |                            |
| <i>Agapanthus praecox</i> subsp. <i>orientalis</i> | Agapanthus        | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | High     | Actively control all smaller localised populations   | Once per year    | At any time   | Zone 2, 3       | Zone 2, 3          | Zone 2, 3       | Zone 2, 3       | Zone 2, 3 |                            |
| <i>Crassula muscosa</i> var. <i>muscosa</i>        | Clubmoss Crassula | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | Medium   | Actively control all smaller localised populations   | Once per year    | At any time   | Zone 2          | Zone 2             | Zone 2          |                 |           |                            |
| <i>Kniphofia uvaria</i>                            | Red-hot Poker     | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | Medium   | Actively control all smaller localised populations   | Once per year    | At any time   | Zone 3          | Zone 3             | Zone 3          |                 |           |                            |
| <i>Zantedeschia aethiopica</i>                     | White Arum-lily   | Eradicate | Eradicate taxon / life form from zone  | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Actively control all smaller localised populations   | Once per year    | Spring/Summer | Zone 1, 2       | Zone 1, 2          | Zone 1, 2       | Zone 1, 2       | Zone 1, 2 | Zone 1, 2                  |
| <b>Scramblers and Climbers</b>                     |                   |           |  |   |          |  |                  |               |                 |                    |                 |                 |           |                            |
| <i>Delairea odorata</i>                            | Cape Ivy          | Control   | Prevent aerial growth and reduce cover of target species by 50 % within the zone | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut back any aerial growth initially and then cut and paint large stems. Hand weed in areas with high fern diversity         | Once per quarter | Spring/Summer | Zone 1, 3       | Zone 1, 3          | Zone 1, 3       | Zone 1, 3       | Zone 1, 3 | Zone 1, 3                  |
| <i>Hedera hibernica</i>                            | Atlantic Ivy      | Eradicate | Eradicate taxon / life form from zone  | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut back any aerial growth initially and paint large stems, back pack elsewhere. Hand weed in areas with high fern diversity | Once per year    | At any time   | Zone 1, 3, 5    | Zone 1, 3, 5       | Zone 1, 3, 5    | Zone 1, 3, 5    |           |                            |
| <i>Rubus anglocandicans</i>                        | Common Blackberry | Control   | Reduce cover of target species by 50 % within the zone                           | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut and paint in areas with good understorey and or fern diversity. Back pack elsewhere.                                     | Once per year    | Summer        | Zone 1, 2, 3, 5 | Zone 1, 2, 3, 5    | Zone 1, 2, 3, 5 | Zone 1, 2, 3, 5 |           |                            |
| <i>Vinca major</i>                                 | Blue Periwinkle   | Contain   | Prevent the target species from increasing in cover or extent across the zone    | Back Pack (low volume spraying)                         | Medium   | Prevent the expansion outside of these areas or until other management objectives are met before treatment here.             | Once per year    | At any time   | Zone 5          | Zone 5             | Zone 5          | Zone 5          | Zone 5    | Zone 5                     |
| <b>Small and Medium Shrubs</b>                     |                   |           |  |   |          |  |                  |               |                 |                    |                 |                 |           |                            |
| <i>Coprosma repens</i>                             | Mirror Bush       | Eradicate | Eradicate taxon / life form from zone  | Cut and Paint/Drill and Fill                            | High     | Target all plants  | Once per year    | At any time   | Zone 3          | Zone 3             | Zone 3          | Zone 3          |           |                            |



| Scientific Name               | Common Name       | Strategy  | Target  | Treatment Method             | Priority | Action   | Frequency     | Timing      | Year 1    | Year 2             | Year 3    | Year 4    | Year 5    | Ongoing Maintenance Period |
|-------------------------------|-------------------|-----------|---|------------------------------|----------|--|---------------|-------------|-----------|--------------------|-----------|-----------|-----------|----------------------------|
| <i>Hebe spp.</i>              | Hebe              | Contain   | Prevent the target species from increasing in cover or extent across the zone | Cut and Paint/Drill and Fill | Low      | Leave mature plants and replace as they senesce. Control any juveniles/recruitment.                  | Once per year | At any time | Zone 3    | Zone 3             | Zone 3    |           |           |                            |
| <b>Trees and Large Shrubs</b> |                   |           |   |                              |          |  |               |             |           |                    |           |           |           |                            |
| <i>Ficus carica</i>           | Fig               | Contain   | Prevent the target species from increasing in cover or extent across the zone | Cut and Paint/Drill and Fill | Low      | Leave mature plants and replace as they senesce. Control any juveniles/recruitment.                  | Once per year | At any time | Zone 1    | Zone 1             | Zone 1    |           |           |                            |
| <i>Ilex aquifolium</i>        | English Holly     | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill | High     | Target all plants  | Once per year | At any time | Zone 1    | Zone 1 (follow-up) |           |           |           |                            |
| <i>Pittosporum undulatum</i>  | Sweet Pittosporum | Control   | Reduce cover of target species by 50 % within the zone                        | Cut and Paint/Drill and Fill | Medium   | Initially target female and juvenile plants in areas with high density, elsewhere control all plants |               |             | Zone 1, 2 | Zone 1, 2          | Zone 1, 2 | Zone 1, 2 | Zone 1, 2 | Zone 1, 2                  |



### 7.3.3 Southern Management Unit

#### 7.3.3.1 Overview

The Southern Management Unit has been divided into six zones (see Table 17 for an overview); the spatial extent of these is depicted in Figure 54 (page 111). Akin to the other management units, the delineation of zones was based on vegetation and habitat type and condition, coupled with the range of threatening processes/management issues evident at the time of survey. Consideration was also given to visitor amenity.

**Table 17 Inventory of zones, Southern Management Unit, Walkerville Foreshore Reserve**

| Management Zone | Land Form / Character  | Area                            |
|-----------------|--|---------------------------------|
| Zone 1          | <ul style="list-style-type: none"> <li>The zone lies to the north-east of Walkerville South Road and encompasses the headland areas of the foreshore reserve from the Walkerville South Boat Ramp, past Bird Rock to the south-east extent of the Management Unit (and also the Foreshore Reserve).</li> <li>The vegetation types/EVCs across the zone are reflective of the geology of the area. The condition of remnant vegetation is varied, and there are small populations of a number of environmental weeds. In some parts, vegetation structure has been modified, and species richness is lower than typical of the constituent EVCs.</li> <li>Visitor amenities include Walkerville South Boat Ramp, walking tracks and the lighthouse signal.</li> </ul> | 15,880 m <sup>2</sup> (1.59 Ha) |
| Zone 2          | <ul style="list-style-type: none"> <li>The zone comprises of three discrete parcels of land that lie between the northern and southern passes of Walkerville South Road.</li> <li>Remnant vegetation across the zone is largely intact, with relatively small weed populations and/or only supports weeds that are easy to control. The upper section of the two larger parcels are subject to increased weed incursion.</li> <li>Visitor amenities include walking tracks.</li> </ul>   | 10,640 m <sup>2</sup> (1.06 Ha) |
| Zone 3          | <ul style="list-style-type: none"> <li>A lower section of gully line that runs down to Robs Spot, and lies in the south-east corner of the Management Unit (and also the Foreshore Reserve).</li> <li>Remnant vegetation within the zone is largely intact, with relatively small weed populations and/or only supports weeds that are easy to control.</li> <li>Visitor amenities include walking tracks.</li> </ul>  | 19,700 m <sup>2</sup> (1.97 Ha) |
| Zone 4          | <ul style="list-style-type: none"> <li>The zone comprises of several discrete blocks and encompasses the area between Walkerville South Road and the Landy Property. It also includes the Carpark.</li> <li>Vegetation within the zone is principally intact structurally, however, the flora is less diverse than typical of the constituent EVCs. There is also evidence of increased weed incursion particularly near the carpark and around the houses.</li> <li>Visitor amenities include a car park.</li> </ul>  | 27,830 m <sup>2</sup> (2.78 Ha) |
| Zone 5          | <ul style="list-style-type: none"> <li>The zone incorporates Riddler's Creek, the main gully line south-west of Walkerville South Road.</li> <li>Vegetation within the zone is highly modified, and comprises of a high proportion of weeds, and has lower species diversity than is typical of the constituent EVC.</li> </ul>  | 4,675 m <sup>2</sup> (0.47 Ha)  |
| Zone 6          | <ul style="list-style-type: none"> <li>The zone comprises of two discrete blocks and encompasses the lower slopes adjacent to the Walkerville South Boat Ramp.</li> <li>Vegetation within the zone is characterised by a high proportion of environmental weeds, and modified indigenous vegetation structure.</li> <li>The FFG Act 1988 listed <i>Eucalyptus kitsoniana</i> (Bog Gum) is known from the boundary of the zone.</li> <li>Visitor amenities include a car park and toilet block.</li> </ul>  | 3,380 m <sup>2</sup> (0.34 Ha)  |

A detailed description of each zone, coupled with a discussion of management recommendations specific to that zone, is provided in Section 7.3.3.2 to Section 7.3.3.7. The descriptions also reference the flora and fauna supported by each zone, as well as the broad vegetation condition classes that were assigned following the site visits.

An inventory of the weeds mapped across the Southern Management Unit during the October – December site visits is provided in Section 7.3.3.8, and a summary of proposed management actions for the unit is provided in Section 7.3.3.9.



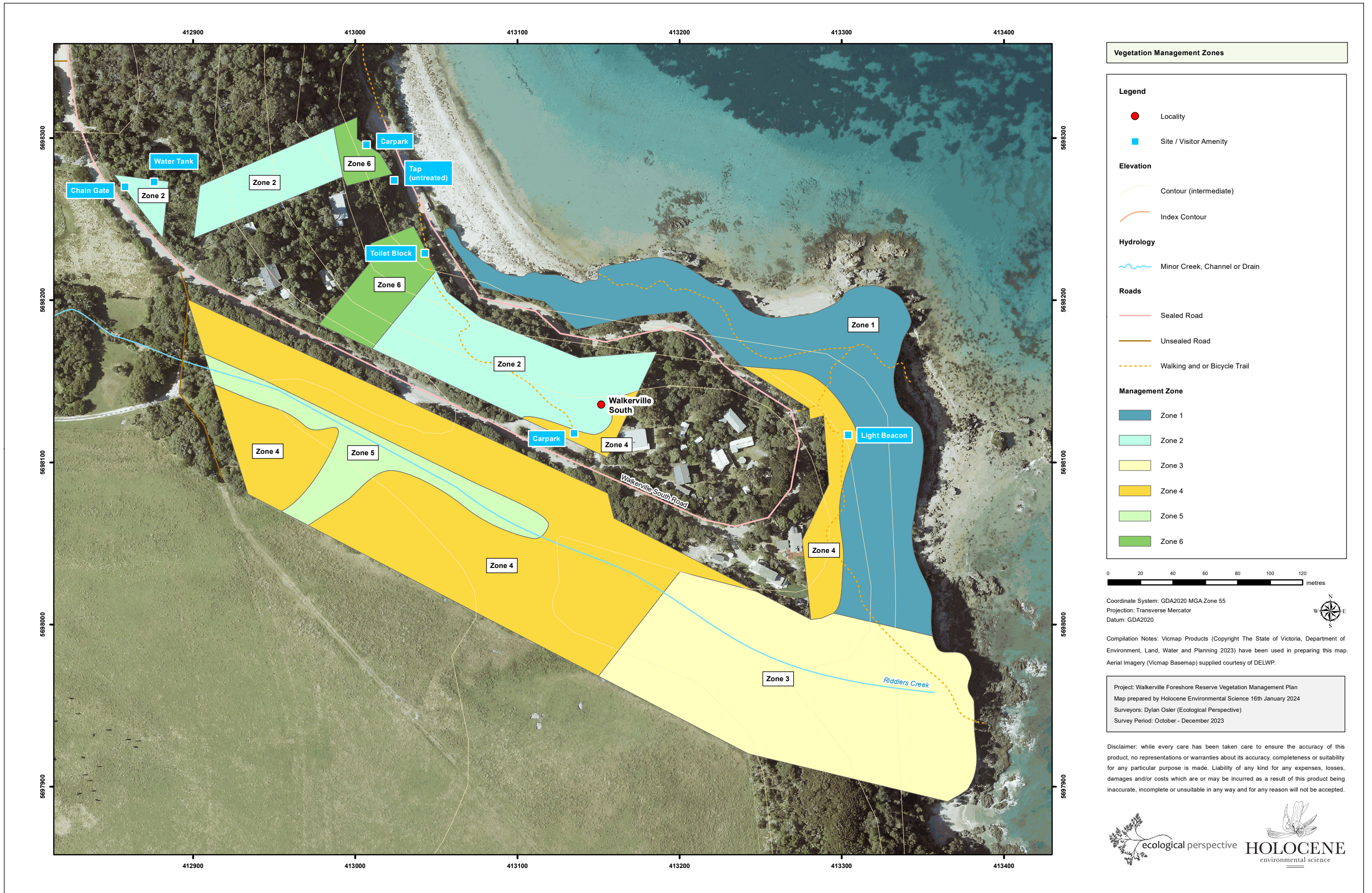


Figure 54 Vegetation Management Zones, Southern Management Unit, Walkerville Foreshore Reserve, December 2023



## 7.3.3.2 Zone 1

| Zone 1                                |  |
|---------------------------------------|--|
| <b>Site Context</b>                   |  |
| Area                                  | <ul style="list-style-type: none"> <li>15,880 m<sup>2</sup> (1.59 Ha)</li> </ul>   |
| Location / Character                  | <ul style="list-style-type: none"> <li>The zone lies to the north-east of Walkerville South Road and encompasses the headland areas of the foreshore reserve from the Walkerville South Boat Ramp, past Bird Rock to the south-east extent of the Management Unit (and also the Foreshore Reserve).</li> <li>The vegetation types / EVCs across the zone are reflective of the geology of the area. The condition of remnant vegetation is varied, and there are small populations of a number of environmental weeds. In some parts, vegetation structure has been modified, and species richness is lower than typical of the constituent EVCs.</li> </ul>   |
| Cultural Heritage Features            | <ul style="list-style-type: none"> <li>Section of stone wall from settlement relating to the Lime Kilns</li> <li>Area of National Geographic/Geomorphological Significance</li> </ul>  |
| Social and Amenity Features           | <ul style="list-style-type: none"> <li>Walkerville South Boat Ramp</li> <li>Walking Tracks</li> <li>Lighthouse (signal)</li> </ul>   |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>High Quality Environmental</li> </ul>   |
| <b>Synopsis of Values and Threats</b> |  |
| Ecological Vegetation Classes         | <ul style="list-style-type: none"> <li>Coastal Headland Scrub (South Gippsland) (EVC 161)</li> <li>Lowland Forest (EVC 16)</li> </ul>  |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>Although some of the areas closer to the private house sites have more degraded vegetation condition, the majority of the headland scrub is intact with good structure and species diversity.</li> </ul>  |
| Threatened and Significant Flora      | <ul style="list-style-type: none"> <li><i>Pomaderris oraria</i> subsp. <i>oraria</i> (Bassian Pomaderris)</li> </ul>   |
| Threatened and Significant Fauna      | <ul style="list-style-type: none"> <li>Common Sandpiper (<i>Actitis hypoleucos</i>)</li> <li>Sooty Oystercatcher (<i>Haematopus fuliginosus</i>)</li> <li>Pied Oystercatcher (<i>Haematopus longirostris</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> </ul>  |
| Priority Environmental Weeds          | <ul style="list-style-type: none"> <li>#<i>Acacia longifolia</i> (Sallow Wattle)</li> <li>*<i>Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li>*<i>Chlorophytum comosum</i> (Spider Plant)</li> <li>*<i>Coprosma repens</i> (Mirror Bush)</li> <li>*<i>Cordyline australis</i> (New Zealand Cabbage-tree)</li> <li>*<i>Cynara cardunculus</i> (Artichoke Thistle)</li> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Lycium ferocissimum</i> (African Box-thorn)</li> <li>*<i>Physalis peruviana</i> (Cape Gooseberry)</li> <li>#<i>Pitiosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Prunus cerasifera</i> (Cherry Plum)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> </ul> |
| Pest Animals                          | <ul style="list-style-type: none"> <li>Foxes and rabbits</li> </ul>  |

**Threatened and Significant Flora**

A number of regionally significant flora were recorded in Zone 1 including the shrub *Pomaderris oraria* subsp. *oraria* (Bassian Pomaderris).

**Threatened and Significant Fauna**

The beach zone to the rock platforms along the coast provide suitable habitat for a range of threatened avian fauna (e.g. Hooded Plover (*Thinornis cucullatus*)).

**Vegetation Description by Condition Class**

Vegetation in Zone 1 was assigned to a single condition class; namely *High Quality Environmental*, however, is also considered to have *high amenity* due to the presence of walking tracks and the nearby boat ramp. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 1 during the October – December site visits is provided



in Section 7.3.3.8. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

### High Quality Environmental Condition Class

#### Composition and Condition

The dominant vegetation type across Zone 1 is Coastal Headland Scrub (South Gippsland), with the majority of vegetation across the headland found to be in good structural condition, and supporting the expected diversity of flora for the EVC. Saliiently, the zone comprises of a complex mix of ecological values, geological significance, social significance (small number of stone walls), and presumably cultural significance.

#### Environmental Weeds

Key taxa that should be targeted for active control include #*Acacia longifolia* (Sallow Wattle), \**Agapanthus praecox* subsp. *orientalis* (Agapanthus), \**Coprosma repens* (Mirror Bush), \**Delairea odorata* (Cape Ivy), \**Lycium ferocissimum* (African Box-thorn), #*Pittosporum undulatum* (Sweet Pittosporum), \**Prunus cerasifera* (Cherry Plum) and \**Rubus anglocandicans* (Common Blackberry).

The weed flora across the zone is varied, and includes some taxa which were not detected elsewhere in the Foreshore Reserve such as the isolated occurrence of \**Cynara cardunculus* (Artichoke Thistle) which was found on the headland and should be actively controlled. There were also numerous small populations of \**Lycium ferocissimum* (African Box-thorn) across the exposed sections of Coastal Headland Scrub (EVC 161); this taxon, which also currently has a limited distribution within the Management Unit yet is more common on the Bird Rock Formations, should also be actively managed.

Young #*Pittosporum undulatum* (Sweet Pittosporum) and \**Acacia longifolia* (Sallow Wattle) are reasonably abundant across some sections of the zone. Management of the (primarily) young plants (and for Sweet Pittosporum, the female plants also) should be implemented within this area as both species are likely to become significant management issues if left untreated. Mature \**Acacia longifolia* (Sallow Wattle) plants should also be controlled in high quality areas.

#### Other Management Concerns / Provisions

Note: this section of the Foreshore Reserve contains some exposed rock walls that are presumably associated with the development of the Lime Kilns and any works in the area should ensure that any culturally heritage values are protected or not inadvertently impacted by any proposed weed control works.

Management of the vegetation along the walking tracks throughout Zone 1 should be undertaken on an annual basis, or more frequently when required. During this task, ideally the removed vegetation will be taken off-site and not left/dumped adjacent to the track as this can lead to further weed invasion; particularly, with respect to species such as \**Delairea odorata* (Cape Ivy).

It is recommended that further advice be sought from stone masons with respect to how to protect the small section of rock walls; where the scope of this advice should include management of vegetation in the immediate vicinity of walls.

During the October – December 2023 site visits, it was evident that some neighbouring landowners had extended management into parts of the Foreshore Reserve; particularly across the upper part of the zone, where vegetation appears to have had been removed to maintain ocean sight lines.



## 7.3.3.3 Zone 2

| Zone 2                                |   |
|---------------------------------------|---|
| <b>Site Context</b>                   |   |
| Area                                  | <ul style="list-style-type: none"> <li>10,640 m<sup>2</sup> (1.06 Ha)</li> </ul>  |
| Location / Character                  | <ul style="list-style-type: none"> <li>The zone comprises of three discrete parcels of land that lie between the northern and southern passes of Walkerville South Road.</li> <li>Remnant vegetation across the zone is largely intact, with relatively small weed populations and/or only supports weeds that are easy to control.</li> <li>The upper section of the two larger parcels are subject to increased weed incursion.</li> <li>There are small intermittent drainage flows through one of the blocks.</li> </ul>  |
| Cultural Heritage Features            | <ul style="list-style-type: none"> <li>Area of National Geographic/Geomorphological Significance</li> </ul>   |
| Social and Amenity Features           | <ul style="list-style-type: none"> <li>Walking Tracks</li> </ul>  |
| Mapped Condition Classes              | <ul style="list-style-type: none"> <li>High Quality Environmental</li> </ul>  |
| <b>Synopsis of Values and Threats</b> |   |
| Ecological Vegetation Classes         | <ul style="list-style-type: none"> <li>Coastal Headland Scrub (South Gippsland) (EVC 161)</li> <li>Coastal Headland Scrub (Walkerville) (EVC 161)</li> <li>Damp Forest (EVC 29)</li> <li>Lowland Forest (EVC 16)</li> </ul>   |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>Although vegetation is more degraded across some of the areas closer to the private house sites, vegetation across the zone is principally intact with good structure and species diversity.</li> </ul>  |
| Threatened and Significant Flora      | <ul style="list-style-type: none"> <li><i>Olearia phlogopappa</i> subsp. <i>insularis</i> (Dusty Daisy-bush)</li> <li><i>Xanthorrhoea australis</i> (Austral Grass-tree)</li> </ul>   |
| Threatened and Significant Fauna      | <ul style="list-style-type: none"> <li>Blue-winged Parrot (<i>Neophema chrysostoma</i>)</li> <li>Lace Monitor (<i>Varanus varius</i>)</li> <li>White-footed Dunnart (<i>Sminthopsis leucopus</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> </ul>   |
| Priority Environmental Weeds          | <ul style="list-style-type: none"> <li>*<i>Acacia longifolia</i> (Sallow Wattle)</li> <li>*<i>Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li>*<i>Coprosma repens</i> (Mirror Bush)</li> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Dipogon lignosus</i> (Common Dipogon)</li> <li>*<i>Hakea drupacea</i> (Sweet Hakea)</li> <li>*<i>Kniphofia uvaria</i> (Red-hot Poker)</li> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> <li>*<i>Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul> |
| Pest Animals                          | <ul style="list-style-type: none"> <li>Foxes and rabbits</li> </ul>   |

**Threatened and Significant Flora**

A number of regionally significant flora were recorded in the vicinity of Zone 2 including *Xanthorrhoea australis* (Austral Grass-tree) and *Olearia phlogopappa* subsp. *insularis* (Dusty Daisy-bush). Although not detected during the October – December 2023 surveys, there is also suitable habitat for *Corybas fimbriatus* (Fringed Helmut-orchid).

**Threatened and Significant Fauna**

The forested areas of Zone 2 are likely to be used by species such as Blue-winged Parrot (*Neophema chrysostoma*), Lace Monitor (*Varanus varius*) and White-footed Dunnart (*Sminthopsis leucopus*) which have both been recorded in close proximity to the area.

**Vegetation Description by Condition Class**

Vegetation in Zone 2 was assigned to a single condition class; namely *High Quality Environmental*, however, is also considered to have *high amenity* due to the presence of walking tracks that link the upper and lower car parks. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 2 during the October –



December site visits is provided in Section 7.3.3.8. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

### High Quality Environmental Condition Class

#### Composition and Condition

Vegetation within Zone 2 is structurally intact and comprises of a mix of EVCs that are reflective of changes in aspect and difference in soil profiles. During the October – December 2023 site visits, there was evidence that the upper sections of the two larger parcels were subject to increased weed incursion.

#### Environmental Weeds

Key taxa that should be targeted for active control include #*Acacia longifolia* (Sallow Wattle), \**Agapanthus praecox* subsp. *orientalis* (Agapanthus), \**Coprosma repens* (Mirror Bush), \**Delairea odorata* (Cape Ivy), \**Dipogon lignosus* (Common Dipogon), \**Hakea drupacea* (Sweet Hakea), \**Kniphofia uvaria* (Red-hot Poker), #*Pittosporum undulatum* (Sweet Pittosporum), \**Rubus anglocandicans* (Common Blackberry) and \**Zantedeschia aethiopica* (White Arum-lily).

The small patches of \**Delairea odorata* (Cape Ivy) and \**Dipogon lignosus* (Common Dipogon) are a high management priority for the zone, as are the scattered \**Rubus anglocandicans* (Common Blackberry) and \**Zantedeschia aethiopica* (White Arum-lily).

There were several concentrated patches of #*Pittosporum undulatum* (Sweet Pittosporum) and \**Acacia longifolia* (Sallow Wattle) in the upper sections of the zone, with dispersed seedlings and juveniles elsewhere. Management of the (primarily) young plants (and for Sweet Pittosporum, the female plants also) should be implemented within this area as both species are likely to become significant management issues if left untreated. Mature \**Acacia longifolia* (Sallow Wattle) plants should also be controlled in high quality areas.

#### Revegetation / Natural Regeneration / Species Enrichment Plantings

Once #*Pittosporum undulatum* (Sweet Pittosporum) and \**Acacia longifolia* (Sallow Wattle) have been managed across the upper parts of the zone, in some parts (particularly the north-east parcel), there will be relatively limited canopy or overstorey structure. To aid in the return of overstorey structure, these areas may need to be revegetated and/or naturally recruiting plants afforded protection. Revegetation works may also be used to increase in the population size of the *Banksia serrata* (Saw Banksia). Other appropriate species include (but are not restricted to) *Banksia integrifolia* (Coast Banksia), *Allocasuarina verticillata* (Drooping Sheoak) and *Bursaria spinosa* var. *macrophylla* (Tree Bursaria).

#### Other Management Concerns / Provisions

Akin to Zone 1, management of the vegetation along the walking tracks throughout Zone 2 should be undertaken on an annual basis, or more frequently when required. During this task, ideally the removed vegetation will be taken off-site and not left/dumped adjacent to the track as this can lead to further weed invasion; particularly, with respect to species such as \**Delairea odorata* (Cape Ivy).



## 7.3.3.4 Zone 3

| Zone 3                               |   |
|--------------------------------------|---|
| Site Context                         |   |
| Area                                 | <ul style="list-style-type: none"> <li>19,700 m<sup>2</sup> (1.97 Ha)</li> </ul>  |
| Location / Character                 | <ul style="list-style-type: none"> <li>A lower section of gully line that runs down to Robs Spot, and lies in the south-east corner of the Management Unit (and also the Foreshore Reserve).</li> <li>Remnant vegetation within the zone is largely intact, with relatively small weed populations and/or only supports weeds that are easy to control.</li> </ul>  |
| Cultural Heritage Features           | <ul style="list-style-type: none"> <li>Area of National Geographic/Geomorphological Significance</li> </ul>   |
| Social and Amenity Features          | <ul style="list-style-type: none"> <li>Walking Tracks</li> </ul>  |
| Mapped Vegetation Condition Classes  | <ul style="list-style-type: none"> <li>High Quality Environmental</li> </ul>  |
| Synopsis of Values and Threats       |   |
| Ecological Vegetation Classes        | <ul style="list-style-type: none"> <li>Coastal Headland Scrub (South Gippsland) (EVC 161)</li> <li>Coastal Headland Scrub (Walkerville Variant) (EVC 161)</li> <li>Damp Forest (EVC 29)</li> <li>Damp Heathy Woodland (EVC 793)</li> <li>Damp Melaleuca Scrub (EVC 948)</li> <li>Lowland Forest (EVC 16)</li> <li>Riparian Fern Scrub (EVC A120)</li> <li>Riparian Thicket (EVC 59)</li> <li>Tree Fern Gully</li> </ul> |
| Vegetation Composition and Condition | <ul style="list-style-type: none"> <li>Although vegetation is more degraded across some of the areas closer to the private house sites, vegetation across the zone is principally intact with good structure and species diversity.</li> </ul>  |
| Threatened and Significant Flora     | <ul style="list-style-type: none"> <li><i>Phyllangium divergens</i> (Wiry Mitrewort)</li> </ul>   |
| Threatened and Significant Fauna     | <ul style="list-style-type: none"> <li>Blue-winged Parrot (<i>Neophema chrysostoma</i>)</li> <li>Lace Monitor (<i>Varanus varius</i>)</li> <li>White-footed Dunnart (<i>Sminthopsis leucopus</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> </ul>   |
| Priority Environmental Weeds         | <ul style="list-style-type: none"> <li>*<i>Coprosma repens</i> (Mirror Bush)</li> <li>*<i>Dipogon lignosus</i> (Common Dipogon)</li> <li>*<i>Hydrangea macrophylla</i> (Hydrangea)</li> <li>*<i>Lycium ferocissimum</i> (African Box-thorn)</li> <li>*<i>Pinus radiata</i> (Radiata Pine)</li> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> </ul>      |
| Pest Animals                         | <ul style="list-style-type: none"> <li>Foxes and rabbits</li> </ul>   |

**Threatened and Significant Flora**

A number of regionally and locally significant flora were recorded in Zone 3 including the small annual species *Phyllangium divergens* (Wiry Mitrewort) which has not previously been recorded within the Cape Liptrap/Walkerville area.

**Threatened and Significant Fauna**

The zone is likely to be used by species such as Blue-winged Parrot (*Neophema chrysostoma*), Lace Monitor (*Varanus varius*) and White-footed Dunnart (*Sminthopsis leucopus*), which have all been recorded in close proximity to the area. The area also has suitable habitat for Swamp Skink (*Lissolepis coventryi*), although the taxon has not previously been recorded in the area.

**Vegetation Description by Condition Class**

Vegetation in Zone 3 was assigned to a single condition class; namely *High Quality Environmental*, however, is also considered to have *high amenity* due to the presence of walking tracks. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory



of the weeds mapped across Zone 3 during the October – December site visits is provided in Section 7.3.3.8. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

### High Quality Environmental Condition Class

#### Composition and Condition

Remnant vegetation within the zone is largely intact, with relatively small weed populations and/or only weeds that are easy to control. The range of EVCs supported by the zone is reflective of the differing aspects, varying soils profiles, and hydrological influences. This is the only zone within the Foreshore Reserve that supports Damp Melaleuca Scrub (EVC 948) and Riparian Thicket (EVC 59).

#### Environmental Weeds

Key taxa that should be targeted for active control include *\*Coprosma repens* (Mirror Bush), *\*Dipogon lignosus* (Common Dipogon), *\*Hydrangea macrophylla* (Hydrangea), *\*Lycium ferocissimum* (African Box-thorn), *\*Pinus radiata* (Radiata Pine), *#Pittosporum undulatum* (Sweet Pittosporum) and *\*Rubus anglocandicans* (Common Blackberry).

The patches of *\*Dipogon lignosus* (Common Dipogon) are a high management priority for the zone, as are small number of scattered *\*Rubus anglocandicans* (Common Blackberry). *#Pittosporum undulatum* (Sweet Pittosporum) is widespread across the zone and should be a high management priority. Isolated stands of *\*Coprosma repens* (Mirror Bush) and *\*Lycium ferocissimum* (African Box-thorn) occur semi-frequently along the eastern side of the zone and should also be a priority.

#### Other Management Concerns / Provisions

Akin to Zones 1 and 2, management of the vegetation along the walking tracks throughout Zone 3 should be undertaken on an annual basis, or more frequently when required. During this task, ideally the removed vegetation will be taken off-site and not left/dumped adjacent to the track as this can lead to further weed invasion; particularly, with respect to species such as *\*Dipogon lignosus* (Common Dipogon).



## 7.3.3.5 Zone 4

| Zone 4                                |   |
|---------------------------------------|---|
| <b>Site Context</b>                   |   |
| Area                                  | <ul style="list-style-type: none"> <li>27,830 m<sup>2</sup> (2.78 Ha)</li> </ul>  |
| Location / Character                  | <ul style="list-style-type: none"> <li>The zone comprises of several discrete blocks and encompasses the area between Walkerville South Road and the Landy Property. It also includes the Carpark.</li> <li>Vegetation within the zone is principally intact structurally, however, the flora is less diverse than typical of the constituent EVCs. There is also evidence of increased weed incursion particularly near the carpark and around the houses.</li> </ul>  |
| Cultural Heritage Features            | <ul style="list-style-type: none"> <li>Area of National Geographic/Geomorphological Significance</li> </ul>   |
| Social and Amenity Features           | <ul style="list-style-type: none"> <li>Carpark</li> </ul>   |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>Moderate Quality Environmental</li> </ul>  |
| <b>Synopsis of Values and Threats</b> |   |
| Ecological Vegetation Classes         | <ul style="list-style-type: none"> <li>Coastal Headland Scrub (South Gippsland) (EVC 161)</li> <li>Damp Forest (EVC 29)</li> <li>Damp Heathy Woodland (EVC 930)</li> <li>Lowland Forest (EVC 16)</li> <li>Riparian Fern Scrub (EVC A120)</li> </ul>   |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>Overall, vegetation has good structure, however, requires a higher level of active management to either maintain the current condition or improve the overall condition of vegetation structure.</li> </ul>  |
| Threatened and Significant Flora      | <ul style="list-style-type: none"> <li><i>Banksia serrata</i> (Saw Banksia)</li> </ul>  |
| Threatened and Significant Fauna      | <ul style="list-style-type: none"> <li>Blue-winged Parrot (<i>Neophema chrysostoma</i>)</li> <li>Lace Monitor (<i>Varanus varius</i>)</li> <li>White-footed Dunnart (<i>Sminthopsis leucopus</i>)</li> <li>White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)</li> <li>White-throated Needletail (<i>Hirundapus caudacutus</i>)</li> </ul>   |
| Priority Environmental Weeds          | <ul style="list-style-type: none"> <li>#<i>Acacia longifolia</i> (Sallow Wattle)</li> <li>*<i>Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li>*<i>Coprosma repens</i> (Mirror Bush)</li> <li>*<i>Dipogon lignosus</i> (Common Dipogon)</li> <li>*<i>Hakea laurina</i> (Pincushion Hakea)</li> <li>*<i>Lonicera japonica</i> (Japanese Honeysuckle)</li> <li>*<i>Passiflora edulis</i> (Black Passion-fruit)</li> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> <li>*<i>Yucca</i> spp. (Yucca)</li> <li>*<i>Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul> |
| Pest Animals                          | <ul style="list-style-type: none"> <li>Foxes and rabbits</li> </ul>   |

**Threatened and Significant Flora**

A number of regionally significant flora were recorded in Zone 4 during the October – December 2023 surveys, including *Banksia serrata* (Saw Banksia). As almost all plants are mature with very little recruitment evident, some management to improve the natural recruitment of the species may be necessary.

**Threatened and Significant Fauna**

The zone is likely to be used by species such as Blue-winged Parrot (*Neophema chrysostoma*), Lace Monitor (*Varanus varius*) and White-footed Dunnart (*Sminthopsis leucopus*), which have all been recorded in close proximity to the area. The area also has suitable habitat for Swamp Skink (*Lissolepis coventryi*), although the taxon has not previously been recorded in the area.

**Vegetation Description by Condition Class**

Vegetation in Zone 4 was assigned to a single condition class; namely *Moderate Quality Environmental*. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 4 during the October – December site visits is provided



in Section 7.3.3.8. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

### Moderate Quality Environmental

#### Composition and Condition

The zone still contains a high cover of character species relating to each of the constituent EVCs, however, the ground layer typically has a high proportion of pasture related weeds which is reflective of the close proximity to the adjoining cleared pastures. Vegetation across the zone also contains a high number and cover of high threat environmental weeds.

#### Environmental Weeds

Key taxa that should be targeted for active control include *Acacia longifolia* (Sallow Wattle), *Agapanthus praecox* subsp. *orientalis* (Agapanthus), *Coprosma repens* (Mirror Bush), *Dipogon lignosus* (Common Dipogon), *Hakea laurina* (Pincushion Hakea), *Lonicera japonica* (Japanese Honeysuckle), *Passiflora edulis* (Black Passion-fruit), *Pittosporum undulatum* (Sweet Pittosporum), *Rubus anglocandicans* (Common Blackberry) and *Zantedeschia aethiopica* (White Arum-lily).

*Pittosporum undulatum* (Sweet Pittosporum) and *Acacia longifolia* (Sallow Wattle) are both common across the zone. Management of the (primarily) young plants (and for Sweet Pittosporum, the female plants also) should be implemented within this area as both species are likely to become significant management issues if left untreated.

Controlling the infestations of scramblers such as *Dipogon lignosus* (Common Dipogon), *Lonicera japonica* (Japanese Honey-suckle) and *Rubus anglocandicans* (Common Blackberry) is also a high priority, with at a minimum any elevated growth to be cut and painted.



## 7.3.3.6 Zone 5

| Zone 5                                |  |
|---------------------------------------|--|
| <b>Site Context</b>                   |  |
| Area                                  | <ul style="list-style-type: none"> <li>4,675 m<sup>2</sup> (0.47 Ha)</li> </ul>  |
| Location / Character                  | <ul style="list-style-type: none"> <li>The zone incorporates Riddler's Creek, the main gully line south-west of Walkerville South Road.</li> <li>Vegetation within the zone is highly modified, and comprises of a high proportion of weeds, and has lower species diversity than is typical of the constituent EVC.</li> </ul>  |
| Cultural Heritage Features            | <ul style="list-style-type: none"> <li>Area of National Geographic/Geomorphological Significance</li> </ul>  |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>Low Quality Environmental</li> </ul>  |
| <b>Synopsis of Values and Threats</b> |  |
| Ecological Vegetation Classes         | <ul style="list-style-type: none"> <li>Riparian Fern Scrub (EVC A120)</li> </ul>   |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>Vegetation is highly modified in terms of both structure and species diversity, and a higher level of active management is required to either maintain the current condition or improve the overall condition of the vegetation structure.</li> </ul>   |
| Threatened and Significant Flora      | <ul style="list-style-type: none"> <li><i>Banksia serrata</i> (Saw Banksia)</li> </ul>   |
| Threatened and Significant Fauna      | <ul style="list-style-type: none"> <li>Although not previously recorded accessing the zone, observations suggest there is suitable habitat for Burrowing Crayfish (<i>Engaeus</i> spp.) and Swamp Skink (<i>Lissolepis coventryi</i>).</li> </ul>  |
| Priority Environmental Weeds          | <ul style="list-style-type: none"> <li>*<i>Cortaderia selloana</i> subsp. <i>selloana</i> (Pampas Grass)</li> <li>*<i>Crocosmia X crocosmiiflora</i> (Montbretia)</li> <li>*<i>Dipogon lignosus</i> (Common Dipogon)</li> <li>*<i>Lonicera japonica</i> (Japanese Honeysuckle)</li> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> <li>*<i>Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul> |
| Pest Animals                          | <ul style="list-style-type: none"> <li>Foxes and rabbits</li> </ul>  |

**Threatened and Significant Flora**

The regionally significant flora *Banksia serrata* (Saw Banksia) was recorded near the boundary of Zone 4 and Zone 5 during the October – December 2023 surveys. As almost all plants are mature with very little recruitment evident, some management to improve the natural recruitment of the species may be necessary.

**Threatened and Significant Fauna**

The area has suitable habitat for Swamp Skink (*Lissolepis coventryi*) and Burrowing Crayfish (*Engaeus* spp.), although neither taxon has previously been recorded in the zone.

**Vegetation Description by Condition Class**

Vegetation in Zone 5 was assigned to a single condition class; namely *Low Quality Environmental*. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 5 during the October – December site visits is provided in Section 7.3.3.8. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

**Low Quality Environmental****Composition and Condition**

Vegetation within the zone comprises of a high cover and diversity of high threat environmental weeds. While the zone still contains a high cover of character species relating to each of the constituent EVCs, the ground layer typically has a



high proportion of pasture related weeds which is reflective of the close proximity of the zone to the adjoining cleared pastures. In part, the decrease in cover of structural species is likely to reflect changes to the landscape and water flow patterns which have led to more prolonged periods of soil saturation and increased nutrient loads.

#### Environmental Weeds

Key taxa that should be targeted for active control include *\*Cortaderia selloana subsp. selloana* (Pampas Grass), *\*Crocsmia X crocosmiiflora* (Montbretia), *\*Dipogon lignosus* (Common Dipogon), *\*Lonicera japonica* (Japanese Honeysuckle), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Rubus anglocandicans* (Common Blackberry) and *\*Zantedeschia aethiopica* (White Arum-lily).

Controlling the infestations of scramblers such as *\*Dipogon lignosus* (Common Dipogon), *\*Lonicera japonica* (Japanese Honey-suckle) and *\*Rubus anglocandicans* (Common Blackberry) is a high priority, with at a minimum any elevated growth to be cut and painted. Managing the small clusters of *#Pittosporum undulatum* (Sweet Pittosporum) is also a priority.

Notably, there are some instances in Zone 5 (and also Zone 6) where the high priority weeds such as *\*Dipogon lignosus* (Common Dipogon), *\*Delairea odorata* (Cape Ivy) and *\*Lonicera japonica* (Japanese Honey-suckle) extend between the Foreshore Reserve, adjoining properties and/or the Cape Liptrap Coastal Park. In these instances, while the control the infestations on the Foreshore Reserve is the primary focus, in order for control to successful over the longer term, the adjoining sources for reinvasion will also need to be treated.

#### Revegetation / Natural Regeneration / Species Enrichment Plantings

A combination of revegetation and measures to protect recruiting plants is likely to be beneficial in areas where there are significant gaps in the canopy (predominately *Melaleuca squarrosa* (Scented Paper-bark)). Given the changes to the hydrological flow patterns and nutrient loading it is recommended the any revegetation plantings use *Melaleuca ericifolia* (Swamp Paper-bark) rather than *Melaleuca squarrosa* (Scented Paper-bark); generally, *Melaleuca ericifolia* (Swamp Paper-bark) has a higher tolerance for both prolonged soil saturation and increased nutrient loads.



## 7.3.3.7 Zone 6

| Zone 6  |   |   |  |
|---|---|---|--|
| Site Context  |   |   |  |
| Area  | <ul style="list-style-type: none"> <li>3,380 m<sup>2</sup> (0.34 Ha)</li> </ul>   |   |  |
| Location / Character  | <ul style="list-style-type: none"> <li>The zone comprises of two discrete blocks and encompasses the lower slopes adjacent to the Walkerville South Boat Ramp.</li> <li>Vegetation within the zone is characterised by a high proportion of environmental weeds, and modified indigenous vegetation structure.</li> </ul>   |   |  |
| Cultural Heritage Features  | <ul style="list-style-type: none"> <li>Area of National Geographic/Geomorphological Significance</li> </ul>   |   |  |
| Social and Amenity Features   | <ul style="list-style-type: none"> <li>Toilet Block</li> <li>Carpark</li> </ul>   |   |  |
| Mapped Vegetation Condition Classes   | <ul style="list-style-type: none"> <li>Moderate Quality Environmental – High Amenity</li> </ul>   |   |  |
| Synopsis of Values and Threats  |   |   |  |
| Ecological Vegetation Classes   | <ul style="list-style-type: none"> <li>Coastal Headland Scrub (South Gippsland) (EVC 161)</li> <li>Coastal Headland Scrub (Walkerville) (EVC 161)</li> <li>Lowland Forest (EVC 16)</li> <li>Tree Fern Gully</li> </ul>  |   |  |
| Vegetation Composition and Condition  | <ul style="list-style-type: none"> <li>Vegetation is modified in terms of both structure and species diversity, and a higher level of active management is required to either maintain the current condition or improve the overall condition of the vegetation structure.</li> </ul>   |   |  |
| Threatened and Significant Flora  | <ul style="list-style-type: none"> <li><i>Eucalyptus kitsoniana</i> (Bog Gum)</li> </ul>  |   |  |
| Threatened and Significant Fauna  | <ul style="list-style-type: none"> <li>None recorded</li> </ul>   |   |  |
| Priority Environmental Weeds  | <table border="0"> <tr> <td> <ul style="list-style-type: none"> <li>*<i>Acacia elata</i> (Cedar Wattle)</li> <li>#<i>Acacia longifolia</i> (Sallow Wattle)</li> <li>*<i>Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li>*<i>Cordyline australis</i> (New Zealand Cabbage-tree)</li> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Dipogon lignosus</i> (Common Dipogon)</li> <li>*<i>Ficus carica</i> (Fig)</li> <li>*<i>Lycium ferocissimum</i> (African Box-thorn)</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>#<i>Melaleuca armillaris</i> subsp. <i>armillaris</i> (Giant Honey-myrtle)</li> <li>*<i>Melaleuca hypericifolia</i> (Hillock Bush)</li> <li>*<i>Passiflora edulis</i> (Black Passion-fruit)</li> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> <li>#<i>Syzygium smithii</i> (Lily Pilly)</li> <li>*<i>Vinca major</i> (Blue Periwinkle)</li> <li>*<i>Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul> </td> </tr> </table> | <ul style="list-style-type: none"> <li>*<i>Acacia elata</i> (Cedar Wattle)</li> <li>#<i>Acacia longifolia</i> (Sallow Wattle)</li> <li>*<i>Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li>*<i>Cordyline australis</i> (New Zealand Cabbage-tree)</li> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Dipogon lignosus</i> (Common Dipogon)</li> <li>*<i>Ficus carica</i> (Fig)</li> <li>*<i>Lycium ferocissimum</i> (African Box-thorn)</li> </ul> | <ul style="list-style-type: none"> <li>#<i>Melaleuca armillaris</i> subsp. <i>armillaris</i> (Giant Honey-myrtle)</li> <li>*<i>Melaleuca hypericifolia</i> (Hillock Bush)</li> <li>*<i>Passiflora edulis</i> (Black Passion-fruit)</li> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> <li>#<i>Syzygium smithii</i> (Lily Pilly)</li> <li>*<i>Vinca major</i> (Blue Periwinkle)</li> <li>*<i>Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul> |
| <ul style="list-style-type: none"> <li>*<i>Acacia elata</i> (Cedar Wattle)</li> <li>#<i>Acacia longifolia</i> (Sallow Wattle)</li> <li>*<i>Agapanthus praecox</i> subsp. <i>orientalis</i> (Agapanthus)</li> <li>*<i>Cordyline australis</i> (New Zealand Cabbage-tree)</li> <li>*<i>Delairea odorata</i> (Cape Ivy)</li> <li>*<i>Dipogon lignosus</i> (Common Dipogon)</li> <li>*<i>Ficus carica</i> (Fig)</li> <li>*<i>Lycium ferocissimum</i> (African Box-thorn)</li> </ul> | <ul style="list-style-type: none"> <li>#<i>Melaleuca armillaris</i> subsp. <i>armillaris</i> (Giant Honey-myrtle)</li> <li>*<i>Melaleuca hypericifolia</i> (Hillock Bush)</li> <li>*<i>Passiflora edulis</i> (Black Passion-fruit)</li> <li>#<i>Pittosporum undulatum</i> (Sweet Pittosporum)</li> <li>*<i>Rubus anglocandicans</i> (Blackberry)</li> <li>#<i>Syzygium smithii</i> (Lily Pilly)</li> <li>*<i>Vinca major</i> (Blue Periwinkle)</li> <li>*<i>Zantedeschia aethiopica</i> (White Arum-lily)</li> </ul>  |   |  |
| Pest Animals  | <ul style="list-style-type: none"> <li>Foxes and rabbits</li> </ul>   |   |  |

Note: specific management relating to the operations of the Walkerville South Toilet Block such as mowing regimes and spraying around infrastructure are not addressed here. The management objectives provided for Zone 6 are limited to improving/maintaining the landscape amenity, with attention also directed to improving the public amenity within this area.

#### Vegetation Description by Condition Class

Vegetation in Zone 6 was assigned to a single condition class; namely *Moderate Quality Environmental*. A description of the composition and condition of this vegetation, together with a summary of key weed flora and management priorities is provided below. An inventory of the weeds mapped across Zone 6 during the October – December site visits is provided in Section 7.3.3.8. Thematic maps depicting the diversity of the weed flora and the abundance and extent of some of the more populous flora are also provided. The abundance of all recorded populations is specified in the accompanying GEODATABASE.

#### Moderate Quality Environmental – High Amenity



### Composition and Condition

The zone comprises of two discrete blocks and encompasses the lower slopes adjacent to the Walkerville South Boat Ramp. Remnant vegetation within the zone is highly modified and contains a high proportion of environmental weeds. While the zone still contains a high cover of character species relating to each of the constituent EVCs, the ground layer typically had a high proportion of pasture related weeds which is reflective of the close proximity to the adjoining cleared areas. Of note, the zone contains a range of public use features such as the public toilets and car park areas.

### Environmental Weeds

Key taxa that should be targeted for active control include *\*Acacia elata* (Cedar Wattle), *#Acacia longifolia* (Sallow Wattle), *\*Agapanthus praecox* subsp. *orientalis* (Agapanthus), *\*Delairea odorata* (Cape Ivy), *\*Dipogon lignosus* (Common Dipogon), *\*Hakea laurina* (Pincushion Hakea), *\*Lonicera japonica* (Japanese Honeysuckle), *\*Lycium ferocissimum* (African Box-thorn), *\*Passiflora edulis* (Black Passion-fruit), *#Pittosporum undulatum* (Sweet Pittosporum), *\*Rubus anglocandicans* (Common Blackberry), *\*Vinca major* (Blue Periwinkle) and *\*Zantedeschia aethiopica* (White Arum-lily).

Akin to the other zones in the Southern Management Unit, controlling the infestations of scramblers such as *\*Delairea odorata* (Cape Ivy), *\*Dipogon lignosus* (Common Dipogon), *\*Lonicera japonica* (Japanese Honey-suckle), *\*Rubus anglocandicans* (Common Blackberry) and *\*Vinca major* (Blue Periwinkle), is a high priority, with at a minimum any elevated growth to be cut and painted. Controlling *\*Acacia elata* (Cedar Wattle) is also a high priority due its capacity to spread more widely.

Management of weeds in the areas upslope is problematic due to the area of freehold land that intersects the two sections of public land. Many of the priority environmental weeds within the zone have a higher concentration on this property, which mean that the success of the weed control will be fairly limited due to the potential for reintroduction from the neighbouring private lands.

### Revegetation / Natural Regeneration / Species Enrichment Plantings

Sections of the zone where there are significant gaps in canopy species such as above the toilet block may benefit from enrichment plantings. Species selection should be restricted to those taxa that are tolerant of shaded, wet conditions such as *Acacia melanoxylon* (Blackwood), *Myrsine howittiana* (Mutton-wood) and *Pittosporum bicolor* (Banyalla).

### Other Management Concerns / Provisions

Note: this section of the Foreshore Reserve contains some exposed rock walls that are presumably associated with the development of the Lime Kilns and any works in the area should ensure that any culturally heritage values are protected or not inadvertently impacted by any proposed weed control works.

Management of the vegetation along the access track to the toilet block and around the historical stonework should be undertaken on an annual basis, or more frequently when required. During this task, ideally the trimmed vegetation will be taken off-site and not left/dumped adjacent to the track as this can lead to further weed invasion; particularly, with respect to species such as *\*Delairea odorata* (Cape Ivy) and *\*Dipogon lignosus* (Common Dipogon).

It is also suggested that the vegetation around the toilet block be 'up lifted'; that is, the lower branches should be removed to help create a more open approach to the toilet block. Currently the *Myoporum insulare* (Common Boobialla) and other species in the area create a dense lower shrub layer, which obscures access to and egress from the area. Having clear site lines to and from the toilets will be more aesthetically pleasing and create a more welcoming environment. Restoration works within the area should also look at increasing the amount of ground and tree ferns. Species such as *Pteris tremula* (Tender Brake) are already quite common and it is likely that with appropriate management other ferns will colonise the area.



## 7.3.3.8 Inventory of Priority Weeds and Thematic Map Series

An inventory of the priority weeds mapped within the Southern Management Unit, by zone, during the October – December site visits is provided in Table 18. Maps that depict the diversity of the recorded weed flora are provided in Figure 55 to Figure 58 (page 126 to page 129). The first set of maps portrays the richness of herbs, graminoids and scramblers; both by species, and by species with reference to the underlying management zone. The second set of maps portrays the richness of trees and shrubs; by species, and by species with reference to the underlying management zone. The age class and abundance of several of the more populous weeds across the unit (e.g. #*Acacia longifolia* (Sallow Wattle), \**Delairea odorata* (Cape Ivy), \**Dipogon lignosus* (Common Dipogon), #*Pittosporum undulatum* (Sweet Pittosporum), \**Rubus anglocandicans* (Common Blackberry) and \**Zantedeschia aethiopica* (White Arum-lily)) is depicted in Figure 59 to Figure 65 (page 130 to page 136).

Table 18 Life form and bioregional status of priority environmental weeds recorded by zone, Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023

| Scientific Name                                    | Common Name              | Life Form                        | Bioregional Status         |                               |                                      | Presence by Zone |        |        |        |        |        | Population Notes  |
|--|--------------------------|----------------------------------|----------------------------|-------------------------------|--------------------------------------|------------------|--------|--------|--------|--------|--------|---|
|  |                          |                                  | CaLP Act 1994              | Weed on National Significance | Victorian Weed Advisory Risk Ranking | Zone 1           | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |   |
| <b>Graminoids</b>                                  |                          |                                  |                            |                               |                                      |                  |        |        |        |        |        |   |
| <i>Cortaderia selloana</i> subsp. <i>selloana</i>  | Pampas Grass             | Large tufted graminoid           | -                          | -                             | High Risk                            |                  |        |        |        | yes    |        | Small population  |
| <i>Crococsmia X crocosmiiflora</i>                 | Montbretia               | Medium to small tufted graminoid | -                          | -                             | Very High Risk                       |                  |        |        |        | yes    |        | -   |
| <b>Herbs</b>                                       |                          |                                  |                            |                               |                                      |                  |        |        |        |        |        |   |
| <i>Agapanthus praecox</i> subsp. <i>orientalis</i> | Agapanthus               | Large herb                       | -                          | -                             | Very High Risk                       | yes              | yes    |        | yes    |        | yes    | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.   |
| <i>Allium cepa</i>                                 | Onion                    | Large herb                       | -                          | -                             | -                                    |                  |        |        |        |        | yes    | Small population  |
| <i>Arum italicum</i> subsp. <i>italicum</i>        | Italian Cuckoo-pint      | Large herb                       | -                          | -                             | Moderately High Risk                 |                  |        |        |        |        | yes    | Restricted range within management zone   |
| <i>Chlorophytum comosum</i>                        | Spider Plant             | Medium herb                      | -                          | -                             | Moderately High Risk                 | yes              |        |        |        |        |        | Restricted range within management zone   |
| <i>Cynara cardunculus</i> subsp. <i>flavescens</i> | Artichoke Thistle        | Large herb                       | Regionally Prohibited Weed | -                             | Medium Risk                          | yes              |        |        |        |        |        | Restricted range within management zone; may require rope access to treat   |
| <i>Kniphofia uvaria</i>                            | Red-hot Poker            | Large herb                       | -                          | -                             | High Risk                            |                  | yes    |        |        |        |        | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.   |
| <i>Zantedeschia aethiopica</i>                     | White Arum-lily          | Large herb                       | -                          | -                             | Very High Risk                       |                  | yes    |        | yes    | yes    | yes    | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.   |
| <b>Palms</b>                                       |                          |                                  |                            |                               |                                      |                  |        |        |        |        |        |   |
| <i>Cordyline australis</i>                         | New Zealand Cabbage-tree | Palm                             | -                          | -                             | High Risk                            | yes              |        |        |        |        | yes    | Species slow to establish/spread but can be problematic. Impacts the environmental character of the area.   |
| <b>Scramblers and Climbers</b>                     |                          |                                  |                            |                               |                                      |                  |        |        |        |        |        |   |
| <i>Delairea odorata</i>                            | Cape Ivy                 | Scrambler or climber             | -                          | -                             | Very High Risk                       | yes              | yes    |        |        |        | yes    | Species difficult to eradicate and will require ongoing management and follow-up treatments to prevent the species spreading elsewhere within the zone.                           |
| <i>Dipogon lignosus</i>                            | Common Dipogon           | Scrambler or climber             | -                          | -                             | Very High Risk                       |                  | yes    | yes    | yes    | yes    | yes    | Very large populations within each zone that will require a sustained management effort. The Committee should also look to work with adjoining properties to manage infestations. |
| <i>Lonicera japonica</i>                           | Japanese Honeysuckle     | Scrambler or climber             | -                          | -                             | Very High Risk                       |                  |        |        | yes    | yes    |        | -   |
| <i>Passiflora edulis</i>                           | Black Passion-fruit      | Scrambler or climber             | -                          | -                             | Medium Risk                          |                  |        |        | yes    |        | yes    | -   |
| <i>Rubus anglocandicans</i>                        | Common Blackberry        | Scrambler or climber             | Regionally Controlled Weed | YES                           | High Risk                            | yes              | yes    | yes    | yes    | yes    |        | Species currently restricted within zone and eradication of mature plants possible. Ongoing follow-up will be required.   |
| <i>Vinca major</i>                                 | Blue Periwinkle          | Scrambler or climber             | -                          | -                             | High Risk                            |                  |        |        |        |        | yes    | Species largely occurs in the more degraded areas; contain populations here   |
| <b>Small and Medium Shrubs</b>                     |                          |                                  |                            |                               |                                      |                  |        |        |        |        |        |   |



| Scientific Name                                      | Common Name        | Life Form           | Bioregional Status         |                               |                                      | Presence by Zone |        |        |        |        |        | Population Notes  |
|--|--------------------|---------------------|----------------------------|-------------------------------|--------------------------------------|------------------|--------|--------|--------|--------|--------|---|
|  |                    |                     | CaLP Act 1994              | Weed on National Significance | Victorian Weed Advisory Risk Ranking | Zone 1           | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |   |
| <i>Coprosma repens</i>                               | Mirror Bush        | Medium shrub        | -                          | -                             | Very High Risk                       | yes              | yes    | yes    | yes    |        |        | Species is currently localised but high priority due to the ability for the species to spread widely              |
| <i>Hakea drupacea</i>                                | Sweet Hakea        | Medium shrub        | -                          | -                             | High Risk                            |                  | yes    |        |        |        |        | Species is currently localised but high priority due to the ability for the species to spread widely              |
| <i>Hakea laurina</i>                                 | Pincushion Hakea   | Medium shrub        | -                          | -                             | Moderately High Risk                 |                  |        |        | yes    |        |        | Species is currently localised but high priority due to the ability for the species to spread widely              |
| <i>Hydrangea macrophylla</i>                         | Hydrangea          | Medium shrub        | -                          | -                             | Lower Risk                           |                  |        | yes    |        |        |        | Species is currently localised but high priority due to the ability for the species to spread widely              |
| <i>Lycium ferocissimum</i>                           | African Box-thorn  | Medium shrub        | Regionally Controlled Weed | YES                           | High Risk                            | yes              |        | yes    |        |        | yes    | Species is currently localised but occurs in a high amenity area along the foreshore. Some access may be required |
| <i>Melaleuca armillaris</i> subsp. <i>armillaris</i> | Giant Honey-myrtle | Medium shrub        | -                          | -                             | Moderately High Risk                 |                  |        |        |        |        | yes    | Some planted specimens  |
| <i>Physalis peruviana</i>                            | Cape Gooseberry    | Small shrub         | -                          | -                             | Moderately High Risk                 | yes              |        |        |        |        |        | -   |
| <i>Prunus cerasifera</i>                             | Cherry Plum        | Medium shrub        | -                          | -                             | High Risk                            | yes              |        |        |        |        |        | Species is currently localised but is a high priority due to its capacity to spread widely                        |
| <b>Trees and Large Shrubs</b>                        |                    |                     |                            |                               |                                      |                  |        |        |        |        |        |   |
| <i>Acacia elata</i>                                  | Cedar Wattle       | Tree or large shrub | -                          | -                             | High Risk                            |                  |        |        |        |        | yes    | Species is currently localised but is a high priority due to its capacity to spread widely                        |
| <i>Acacia longifolia</i>                             | Sallow Wattle      | Tree or large shrub | -                          | -                             | Very High Risk                       | yes              | yes    |        | yes    |        | yes    | -   |
| <i>Ficus carica</i>                                  | Fig                | Tree or large shrub | -                          | -                             | High Risk                            |                  |        |        |        |        | yes    | Planted specimens may be of historic value  |
| <i>Melaleuca hypericifolia</i>                       | Hillock Bush       | Tree or large shrub | -                          | -                             | High Risk                            |                  |        |        |        |        | yes    | -   |
| <i>Pittosporum undulatum</i>                         | Sweet Pittosporum  | Tree or large shrub | -                          | -                             | Very High Risk                       | yes              | yes    | yes    | yes    | yes    | yes    | Widespread at low density, target high quality areas first  |
| <i>Pinus radiata</i>                                 | Radiata Pine       | Tree or large shrub | -                          | -                             | Very High Risk                       |                  |        | yes    |        |        |        | Restricted, one mature tree   |
| <i>Syzygium smithii</i>                              | Lilly Pilly        | Tree or large shrub | -                          | -                             | Medium Risk                          |                  |        |        |        |        | yes    | Small number of plants recorded   |
| <i>Yucca</i> spp.                                    | Yucca              | Tree or large shrub | -                          | -                             | -                                    |                  |        |        | yes    |        |        | Small number of plants recorded   |



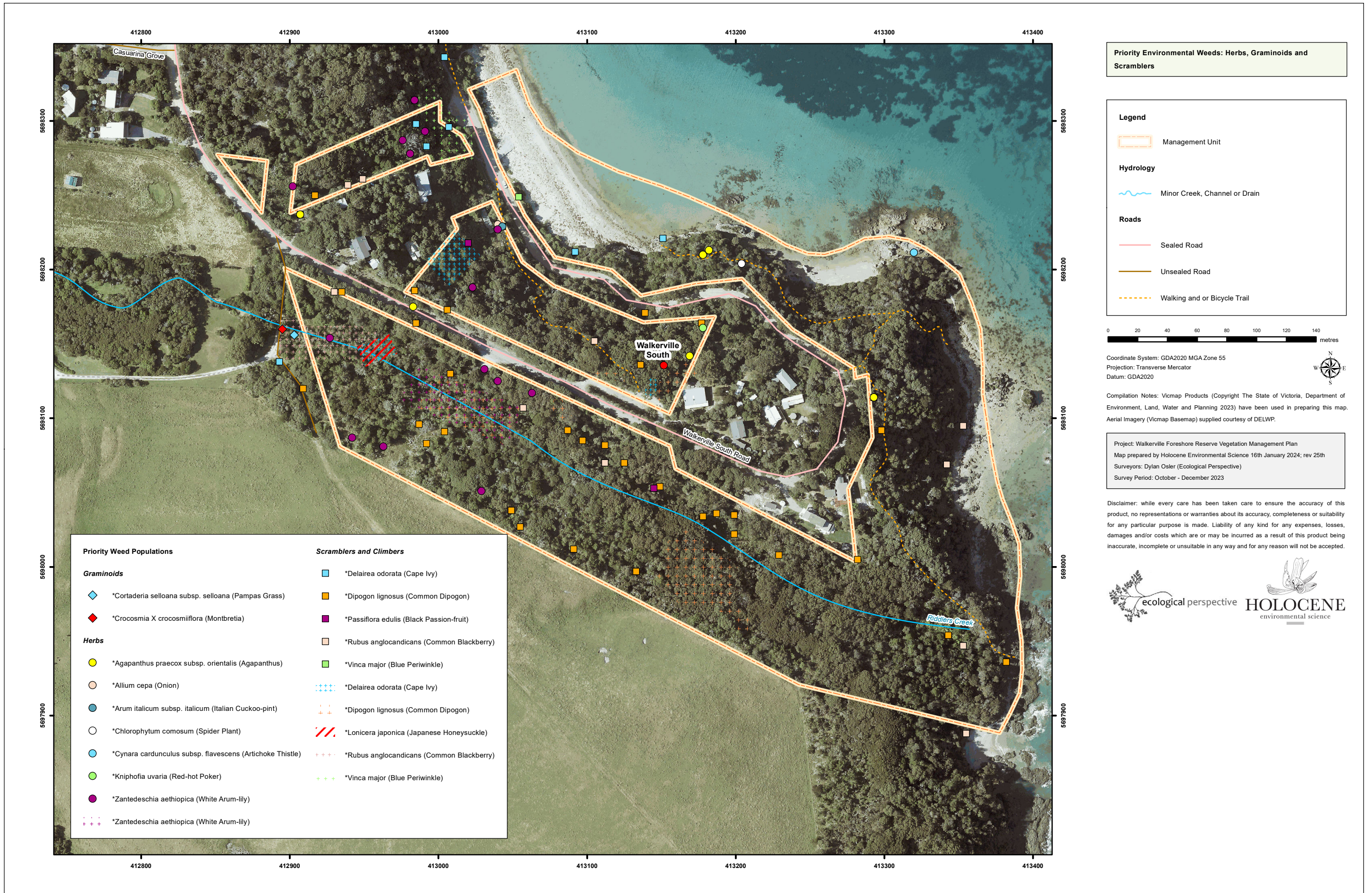


Figure 55 Priority environmental weeds by life form (herbs, graminoids and scramblers), Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023



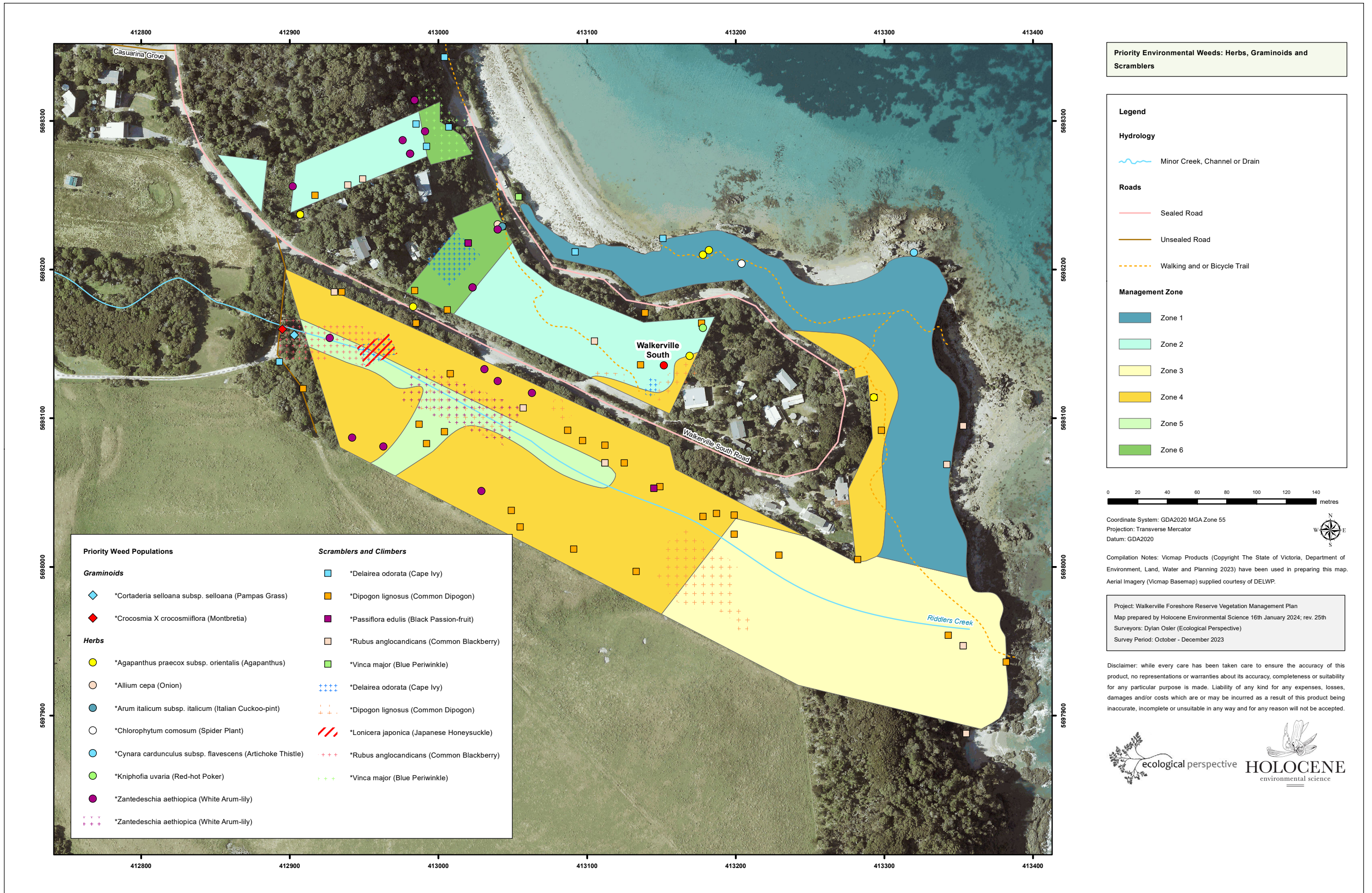


Figure 56 Priority environmental weeds by life form (herbs, graminoids and scramblers) and zone, Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023



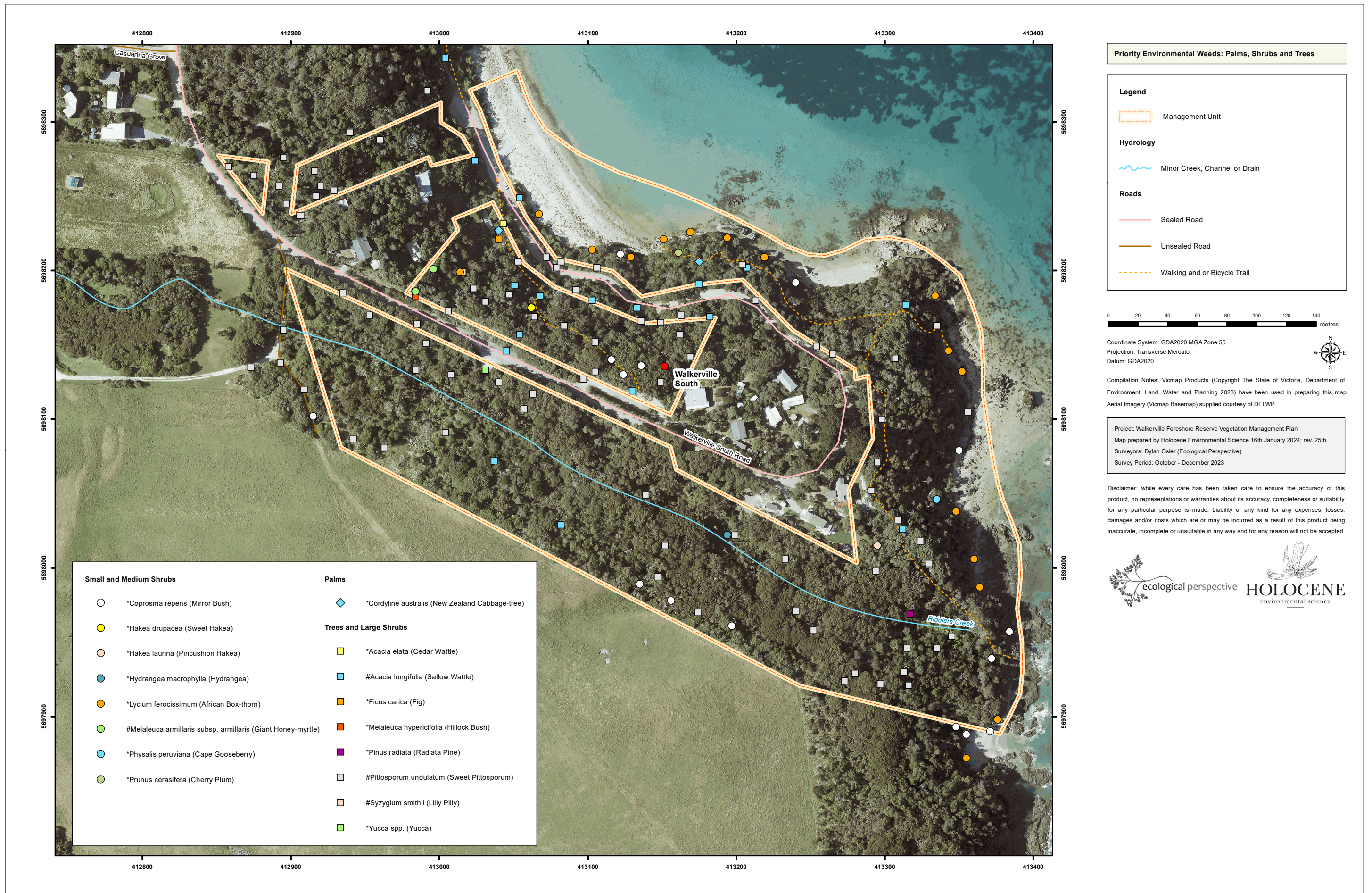


Figure 57 Priority environmental weeds by life form (palms, shrubs and trees), Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023



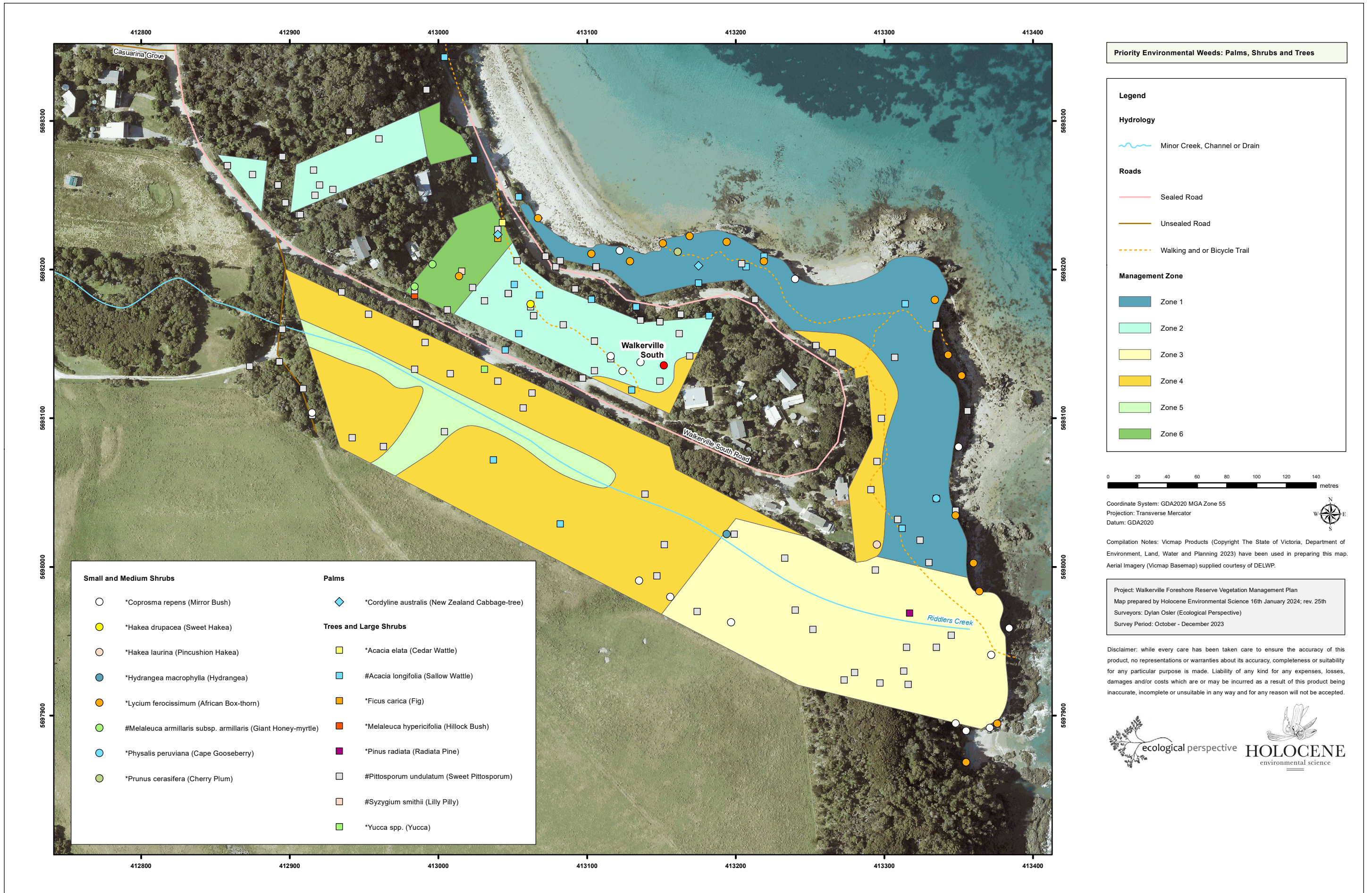


Figure 58 Priority environmental weeds by life form (palms, shrubs and trees) and zone, Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023





Figure 59 Extent and abundance of #Acacia longifolia (Sallow Wattle), Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023





Figure 60 Extent and abundance of \**Delawarea odorata* (Cape Ivy), Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023





Figure 61 Extent and abundance of \*Dipogon lignosus (Common Dipogon), Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023





Figure 62 Extent and abundance of \*Lycium ferocissimum (African Box-thorn), Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023





Figure 63 Extent and abundance of #Pittosporum undulatum (Sweet Pittosporum), Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023





Figure 64 Extent and abundance of \*Rubus anglocandicans (Common Blackberry), Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023





Figure 65 Extent and abundance of \**Zantedeschia aethiopica* (White Arum-lily), Southern Management Unit, Walkerville Foreshore Reserve, October – December 2023



7.3.3.9 Summary of Proposed Works by Year and Zone

Weed management actions that are proposed for the Southern Management Unit are itemised in Table 19. An action is given for each of the priority weeds/overabundant flora that were recorded during the 2023 surveys, and an overall *strategy* has been assigned (e.g. eradicate, control or contain) for each taxon, as well as appropriate *treatment methods*. Reference is also made to the *zone* where works should occur, the *sequencing of works* (i.e. whether they should be undertaken in Year 1 to Year 5), and the appropriate *frequency* and *timing* of each action. Should it not be possible to complete all proposed actions in each Year, then consideration should be given to the *priority* assigned to each action, and high priority actions completed ahead of medium and low priority actions. Sequencing is provided for Year 1 – Year 5, as well as an ongoing maintenance period.

Table 19 Summary of proposed weed management actions by year and zone, Southern Management Unit, Walkerville Foreshore Reserve

| Scientific Name                                    | Common Name              | Strategy  | Target   | Treatment Method  | Priority | Action  | Frequency        | Timing        | Year 1  | Year 2             | Year 3             | Year 4             | Year 5             | Ongoing Maintenance Period |
|--|--------------------------|-----------|--|---|----------|---|------------------|---------------|---|--------------------|--------------------|--------------------|--------------------|----------------------------|
| <b>Graminoids</b>                                  |                          |           |  |   |          |   |                  |               |   |                    |                    |                    |                    |                            |
| <i>Cortaderia selloana</i> subsp. <i>selloana</i>  | Pampas Grass             | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | High     | Actively control all plants across the zone   | Once per year    | At any time   | Zone 5  | Zone 5 (follow-up) |                    |                    |                    |                            |
| <i>Crocsmia X crocosmiiflora</i>                   | Montbretia               | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | High     | Actively control all plants across the zone   | Once per year    | At any time   | Zone 5  | Zone 5             | Zone 5             | Zone 5             |                    |                            |
| <b>Herbs</b>                                       |                          |           |  |   |          |   |                  |               |   |                    |                    |                    |                    |                            |
| <i>Agapanthus praecox</i> subsp. <i>orientalis</i> | Agapanthus               | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | High     | Actively control all smaller localised populations  | Once per year    | At any time   | Zone 1, 2, 4, 6                                   | Zone 1, 2, 4, 6    | Zone 1, 2, 4, 6    | Zone 1, 2, 4, 6    | Zone 1, 2, 4, 6    |                            |
| <i>Allium cepa</i>                                 | Onion                    | Contain   | Prevent the target species from increasing in cover or extent across the zone    | Hand weed/Back Pack (low volume spraying)               | Low      | Actively control all plants across the zone   | Once per year    | Summer        | Zone 6  | Zone 6 (follow-up) |                    |                    |                    |                            |
| <i>Arum italicum</i> subsp. <i>italicum</i>        | Italian Cuckoo-pint      | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | Medium   | Actively control all smaller localised populations  | Once per year    | At any time   | Zone 6  | Zone 6             |                    |                    |                    |                            |
| <i>Chlorophytum comosum</i>                        | Spider Plant             | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | Low      | Actively control all smaller localised populations  | Once per year    | At any time   | Zone 1  | Zone 1 (follow-up) |                    |                    |                    |                            |
| <i>Cynara cardunculus</i> subsp. <i>flavescens</i> | Artichoke Thistle        | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | Medium   | Actively control all smaller localised populations  | Once per year    | At any time   | Zone 1  | Zone 1             |                    |                    |                    |                            |
| <i>Kniphofia uvaria</i>                            | Red-hot Poker            | Eradicate | Eradicate taxon / life form from zone  | Hand weed/Back Pack (low volume spraying)               | Medium   | Actively control all smaller localised populations  | Once per year    | At any time   | Zone 2  | Zone 2             | Zone 2             | Zone 2             |                    |                            |
| <i>Zantedeschia aethiopica</i>                     | White Arum-lily          | Eradicate | Eradicate taxon / life form from zone  | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Actively control all smaller localised populations  | Once per year    | Spring/Summer | Zone 2, 4, 5, 6                                   | Zone 2, 4, 5, 6    | Zone 2, 4, 5, 6    | Zone 2, 4, 5, 6    | Zone 2, 4, 5, 6    | Zone 2, 4, 5, 6            |
| <b>Palms</b>                                       |                          |           |  |   |          |   |                  |               |   |                    |                    |                    |                    |                            |
| <i>Cordyline australis</i>                         | New Zealand Cabbage-tree | Eradicate | Eradicate taxon / life form from zone  | Cut and Paint/Hand weed/Back Pack (low volume spraying) | Medium   | Actively control all smaller localised populations  | Once per year    | Spring/Summer | Zone 1, 6   | Zone 1, 6          |                    |                    |                    |                            |
| <b>Scramblers and Climbers</b>                     |                          |           |  |   |          |   |                  |               |   |                    |                    |                    |                    |                            |
| <i>Delawarea odorata</i>                           | Cape Ivy                 | Control   | Prevent aerial growth and reduce cover of target species by 50 % within the zone | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut back any aerial growth initially and then cut and paint large stems. Hand weed in areas with high fern diversity                      | Once per quarter | Spring/Summer | Zone 1, 2, 6 (cut and paint elevated stems)       | Zone 1, 2, 6       | Zone 1, 2, 6       | Zone 1, 2, 6       | Zone 1, 2, 6       | Zone 1, 2, 6               |
| <i>Dipogon lignosus</i>                            | Common Dipogon           | Eradicate | Eradicate taxon / life form from zone  | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut back any aerial growth initially and then cut and paint large stems, back pack elsewhere. Hand weed in areas with high fern diversity | Once per quarter | At any time   | Zone 2, 3, 4, 5, 6 (cut and paint elevated stems) | Zone 2, 3, 4, 5, 6 | Zone 2, 3, 4, 5, 6 | Zone 2, 3, 4, 5, 6 | Zone 2, 3, 4, 5, 6 | Zone 2, 3, 4, 5, 6         |



| Scientific Name                                      | Common Name          | Strategy  | Target  | Treatment Method  | Priority | Action  | Frequency        | Timing      | Year 1                                   | Year 2             | Year 3             | Year 4             | Year 5          | Ongoing Maintenance Period |
|--|----------------------|-----------|---|---|----------|---|------------------|-------------|--|--------------------|--------------------|--------------------|-----------------|----------------------------|
| <i>Lonicera japonica</i>                             | Japanese Honeysuckle | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut back any aerial growth initially and then cut and paint large stems, back pack elsewhere. Hand weed in areas with high fern diversity | Once per quarter | At any time | Zone 4, 5 (cut and paint elevated stems) | Zone 4, 5          | Zone 4, 5          | Zone 4, 5          | Zone 4, 5       | Zone 4, 5                  |
| <i>Passiflora edulis</i>                             | Black Passion-fruit  | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut back any aerial growth initially and then cut and paint large stems, back pack elsewhere. Hand weed in areas with high fern diversity | Once per quarter | At any time | Zone 4, 6                                | Zone 4, 6          | Zone 4, 6          | Zone 4, 6          | Zone 4, 6       | Zone 4, 6                  |
| <i>Rubus anglocandicans</i>                          | Common Blackberry    | Control   | Reduce cover of target species by 50 % within the zone                        | Cut and Paint/Hand weed/Back Pack (low volume spraying) | High     | Cut and paint in areas with good understorey and / or fern diversity. Back pack elsewhere.  | Once per year    | Summer      | Zone 1, 2, 3, 4, 5                       | Zone 1, 2, 3, 4, 5 | Zone 1, 2, 3, 4, 5 | Zone 1, 2, 3, 4, 5 |                 |                            |
| <i>Vinca major</i>                                   | Blue Periwinkle      | Contain   | Prevent the target species from increasing in cover or extent across the zone | Back Pack (low volume spraying)                         | Low      | Prevent expansion outside of current population extent, or until other management objectives are met, before treatment here.              | Once per year    | At any time | Zone 6                                   | Zone 6             | Zone 6             | Zone 6             | Zone 6          | Zone 6                     |
| <b>Small and Medium Shrubs</b>                       |                      |           |   |   |          |   |                  |             |  |                    |                    |                    |                 |                            |
| <i>Coprosma repens</i>                               | Mirror Bush          | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | High     | Target all plants   | Once per year    | At any time | Zone 1, 2, 3, 4                          | Zone 1, 2, 3, 4    | Zone 1, 2, 3, 4    | Zone 1, 2, 3, 4    |                 |                            |
| <i>Hakea drupacea</i>                                | Sweet Hakea          | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | High     | Target all plants   | Once per year    | At any time | Zone 2                                   | Zone 2             |                    |                    |                 |                            |
| <i>Hakea laurina</i>                                 | Pincushion Hakea     | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | High     | Target all plants   | Once per year    | At any time | Zone 4                                   | Zone 4             |                    |                    |                 |                            |
| <i>Hydrangea macrophylla</i>                         | Hydrangea            | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | Medium   | Target all plants   | Once per year    | At any time | Zone 3                                   | Zone 3             |                    |                    |                 |                            |
| <i>Lycium ferocissimum</i>                           | African Box-thorn    | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | High     | Target all plants   | Once per year    | At any time | Zone 1, 3, 6                             | Zone 1, 3, 6       | Zone 1, 3, 6       | Zone 1, 3, 6       |                 |                            |
| <i>Melaleuca armillaris</i> subsp. <i>armillaris</i> | Giant Honey-myrtle   | Contain   | Prevent the target species from increasing in cover or extent across the zone | Cut and Paint/Drill and Fill                            | Medium   | Leave mature plants and replace as they senesce. Control any juveniles/recruitment.   | Once per year    | At any time | Zone 6                                   | Zone 6             | Zone 6             |                    |                 |                            |
| <i>Physalis peruviana</i>                            | Cape Gooseberry      | Contain   | Prevent the target species from increasing in cover or extent across the zone | Cut and Paint/Drill and Fill                            | Low      | Leave mature plants and replace as they senesce. Control any juveniles/recruitment.   | Once per year    | At any time | Zone 1                                   | Zone 1             | Zone 1             |                    |                 |                            |
| <i>Prunus cerasifera</i>                             | Cherry Plum          | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | High     | Target all plants   | Once per year    | Summer      | Zone 1                                   | Zone 1             |                    |                    |                 |                            |
| <b>Trees and Large Shrubs</b>                        |                      |           |   |   |          |   |                  |             |  |                    |                    |                    |                 |                            |
| <i>Acacia elata</i>                                  | Cedar Wattle         | Eradicate | Eradicate taxon / life form from zone   | Cut and Paint/Drill and Fill                            | High     | Target all plants   | Once per year    | Summer      | Zone 6                                   | Zone 6             |                    |                    |                 |                            |
| <i>Acacia longifolia</i>                             | Sallow Wattle        | Control   | Reduce cover of target species by 50 % within the zone                        | Cut and Paint/Drill and Fill                            | High     | Target juvenile plants initially and mature plants in high quality area.  | Once per year    | At any time | Zone 1, 3, 4, 6                          | Zone 1, 3, 4, 6    | Zone 1, 3, 4, 6    | Zone 1, 3, 4, 6    | Zone 1, 3, 4, 6 | Zone 1, 3, 4, 6            |
| <i>Ficus carica</i>                                  | Fig                  | Contain   | Prevent the target species from increasing in cover or extent across the zone | Cut and Paint/Drill and Fill                            | Low      | Leave mature plants and replace as they senesce. Control any juveniles/recruitment.   | Once per year    | At any time | Zone 6                                   | Zone 6             | Zone 6             |                    |                 |                            |



| Scientific Name                | Common Name       | Strategy  | Target   | Treatment Method             | Priority | Action   | Frequency        | Timing      | Year 1                | Year 2                | Year 3                | Year 4                | Year 5                | Ongoing Maintenance Period |
|--------------------------------|-------------------|-----------|--|------------------------------|----------|--|------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------|
| <i>Melaleuca hypericifolia</i> | Hillock Bush      | Eradicate | Eradicate taxon / life form from zone                  | Cut and Paint/Drill and Fill | High     | Target all plants  | Once per year    | Summer      | Zone 6                | Zone 6                |                       |                       |                       |                            |
| <i>Pittosporum undulatum</i>   | Sweet Pittosporum | Control   | Reduce cover of target species by 50 % within the zone | Cut and Paint/Drill and Fill | Medium   | Initially target female and juvenile plants in areas with high density, elsewhere control all plants | Once per quarter | At any time | Zone 1, 2, 3, 4, 5, 6 | Zone 1, 2, 3, 4, 5, 6 | Zone 1, 2, 3, 4, 5, 6 | Zone 1, 2, 3, 4, 5, 6 | Zone 1, 2, 3, 4, 5, 6 | Zone 1, 2, 3, 4, 5, 6      |
| <i>Pinus radiata</i>           | Radiata Pine      | Eradicate | Eradicate taxon / life form from zone                  | Drill and Fill               | Medium   | Either fell tree or drill and fill and leave standing  | Once per quarter | At any time | Zone 3                |                       |                       |                       |                       |                            |
| <i>Syzygium smithii</i>        | Lilly Pilly       | Eradicate | Eradicate taxon / life form from zone                  | Cut and Paint/Drill and Fill | Medium   | Target all plants  | Once per year    | At any time | Zone 6                |                       |                       |                       |                       |                            |
| <i>Yucca spp.</i>              | Yucca             | Eradicate | Eradicate taxon / life form from zone                  | Cut and Paint/Drill and Fill | Medium   | Target all plants  | Once per year    | At any time | Zone 4                |                       |                       |                       |                       |                            |



## 8.0 IMPLEMENTATION

### 8.1 Works Program

A works plan should be prepared for the Foreshore Reserve using the management objectives and provisions detailed in Section 7.3 and the weed action tables for each Management Unit and Zone that are also provided in Section 7.3. A copy of these is also provided in the accompanying Excel Workbook. Notably, for each Management Unit and Zone, objectives and priorities will vary in accordance with the extant condition of vegetation, the presence of threatened flora and fauna, and the level of amenity associated with each area. For the most part, the Zones for each Management Unit (i.e. Northern, Central and Southern) are numbered in order of ecological value; that is, Zone 1 typically comprises of the highest quality and most intact areas of remnant vegetation, where the objective of weed control works will be to maintaining these conditions. Comparably, Zones assigned higher numbers (e.g. Zone 4 or 5), are likely to comprise of less structurally intact and diverse vegetation, and to support a more diverse weed flora.

The importance that is placed on the amenity values of the area means that, in some instances, weed populations should be targeted across the whole of the study area; particularly, where they are visually intrusive or where they are a focus of management across the broader community (e.g. Common Blackberry). Further, for each zone, the sequencing of works and timing required to manage specific weed populations (frequency and total number of treatments) will vary depending on the success of previous control/treatment efforts and the emergence of new threats, and consequently an adaptive approach to implementation should be adopted.

### 8.2 Monitoring and Review

In addition to completing the monitoring actions itemised in Section 7.0, an annual review of the Works Program should be completed to reassess priorities in accordance with changes in site conditions and budget implications. Ongoing monitoring and review of this plan is required to ensure that strategic directions and actions remain relevant, and new threats are incorporated into the plan. Site observations that are made by the contractors undertaking works should also inform plan revisions.

With respect to assessing the success of weed management, it is recommended that the Excel Template that was provided be used. Essentially the 'Summary of Proposed Works by Year and Zone' will form the basis of monitoring. During the annual walk through of each zone, reference should be made to the relevant weed maps, and notations can be made for each target weed regarding whether there has been a reduction in cover, or whether the weed appears to have been eradicated from the said zone.



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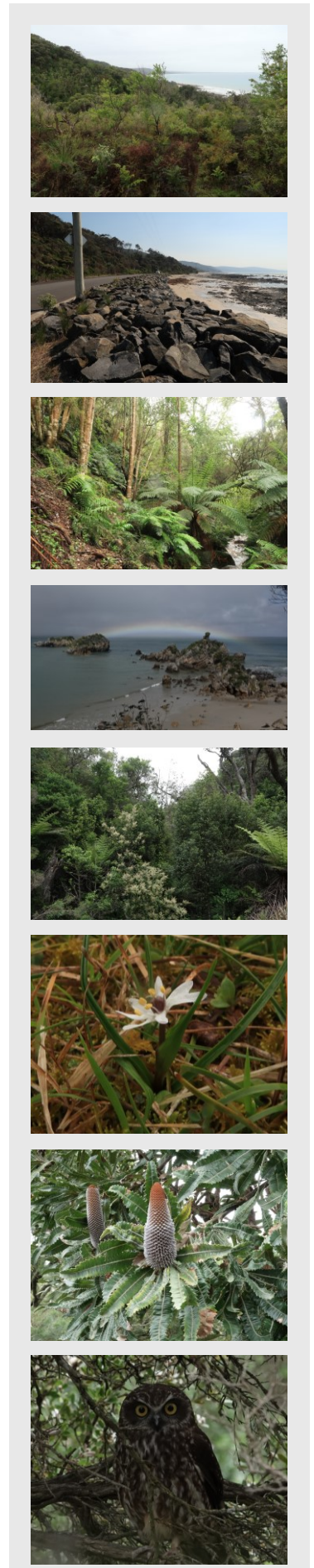
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## APPENDICES





APPENDIX 1 Flora species recorded at Walkerville Foreshore Reserve, October – December 2023

Table 20 Flora species, by management unit, recorded at Walkerville Foreshore Reserve, October – December 2023

| Conservation Status |     | Origin | Taxon ID | Scientific Name                                       | Common Name           | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|---|-----------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |   |                       |           | Northern        | Central | Southern |
|                     |     | *      | 500031   | <i>Acacia elata</i>                                   | Cedar Wattle          | T         |                 |         | yes      |
|                     |     | #      | 505128   | <i>Acacia longifolia</i>                              | Sallow Wattle         | T         | yes             | yes     | yes      |
|                     |     |        | 500057   | <i>Acacia melanoxylon</i>                             | Blackwood             | T         | yes             | yes     | yes      |
|                     |     |        | 500062   | <i>Acacia mucronata</i> subsp. <i>longifolia</i>      | Narrow-leaf Wattle    | MS        | yes             |         |          |
|                     |     |        | 500063   | <i>Acacia myrtifolia</i>                              | Myrtle Wattle         | MS        |                 |         | yes      |
|                     |     |        | 500091   | <i>Acacia stricta</i>                                 | Hop Wattle            | MS        | yes             | yes     | yes      |
|                     |     |        | 500092   | <i>Acacia suaveolens</i>                              | Sweet Wattle          | MS        | yes             | yes     | yes      |
|                     |     |        | 504213   | <i>Acacia verticillata</i> subsp. <i>verticillata</i> | Prickly Moses         | MS        | yes             | yes     | yes      |
|                     |     |        | 500105   | <i>Acaena novae-zelandiae</i>                         | Bidgee-widgee         | MH        | yes             | yes     | yes      |
|                     |     | *      | 502966   | <i>Acetosella vulgaris</i>                            | Sheep Sorrel          | MH        | yes             | yes     | yes      |
|                     |     |        | 504439   | <i>Acianthus pusillus</i>                             | Small Mosquito-orchid | MH        | yes             |         | yes      |
|                     |     |        | 500122   | <i>Acrotriche prostrata</i>                           | Trailing Ground-berry | PS        | yes             | yes     | yes      |
|                     |     |        | 500123   | <i>Acrotriche serrulata</i>                           | Honey-pots            | PS        | yes             | yes     | yes      |
|                     |     |        | 500129   | <i>Adiantum aethiopicum</i>                           | Common Maidenhair     | GF        | yes             | yes     | yes      |
|                     |     | *      | 503638   | <i>Agapanthus praecox</i> subsp. <i>orientalis</i>    | Agapanthus            | LH        | yes             | yes     | yes      |
|                     |     | *      | 500153   | <i>Agrostis capillaris</i>                            | Brown-top Bent        | MTG       | yes             | yes     | yes      |
|                     |     | *      | 507694   | <i>Allium cepa</i>                                    | Onion                 | LH        |                 |         | yes      |
|                     |     | *      | 500179   | <i>Allium triquetrum</i>                              | Angled Onion          | MH        | yes             |         | yes      |
|                     |     |        | 500677   | <i>Allocasuarina littoralis</i>                       | Black Sheoak          | T         | yes             | yes     | yes      |
|                     |     |        | 500683   | <i>Allocasuarina paludosa</i>                         | Scrub Sheoak          | MS        | yes             |         | yes      |
|                     |     |        | 500685   | <i>Allocasuarina verticillata</i>                     | Drooping Sheoak       | T         | yes             | yes     | yes      |
|                     |     |        | 500188   | <i>Alyxia buxifolia</i>                               | Sea Box               | MS        |                 | yes     | yes      |
|                     |     |        | 500206   | <i>Amperea xiphoclada</i> var. <i>xiphoclada</i>      | Broom Spurge          | SS        | yes             | yes     | yes      |
|                     |     |        | 500220   | <i>Amyema pendula</i>                                 | Drooping Mistletoe    | E         | yes             |         |          |
|                     |     | *      | 500236   | <i>Anthoxanthum odoratum</i>                          | Sweet Vernal-grass    | MTG       | yes             | yes     | yes      |
|                     |     |        | 500237   | <i>Aotus ericoides</i>                                | Common Aotus          | MS        | yes             |         |          |
|                     |     |        | 500247   | <i>Apium prostratum</i> subsp. <i>prostratum</i>      | Sea Celery            | SH        | yes             | yes     | yes      |

| Conservation Status |     | Origin | Taxon ID | Scientific Name   | Common Name         | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|---|---------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |   |                     |           | Northern        | Central | Southern |
|                     |     | *      | 500255   | <i>Arctotheca calendula</i>   | Cape Weed           | MH        | yes             | yes     | yes      |
|                     |     | *      | 503644   | <i>Arum italicum</i> subsp. <i>italicum</i>                           | Italian Cuckoo-pint | LH        | yes             |         | yes      |
|                     |     | *      | 500276   | <i>Asparagus scandens</i>   | Asparagus Fern      | SC        | yes             |         |          |
|                     |     |        | 500288   | <i>Asplenium flabellifolium</i>                                       | Necklace Fern       | GF        | yes             |         | yes      |
|                     |     |        | 500316   | <i>Atriplex cinerea</i>   | Coast Saltbush      | MS        | yes             | yes     | yes      |
|                     |     |        | 500337   | <i>Australina pusilla</i> subsp. <i>muelleri</i>                      | Shade Nettle        | MH        | yes             | yes     |          |
|                     |     |        | 503276   | <i>Austrostipa flavescens</i>   | Coast Spear-grass   | LTG       | yes             | yes     | yes      |
|                     |     |        | 503293   | <i>Austrostipa stipoides</i>  | Prickly Spear-grass | MTG       |                 |         | yes      |
|                     |     |        | 500362   | <i>Banksia integrifolia</i> subsp. <i>integrifolia</i>                | Coast Banksia       | T         | yes             | yes     | yes      |
|                     |     |        | 500363   | <i>Banksia marginata</i>  | Silver Banksia      | MS        |                 |         | yes      |
|                     |     |        | 500366   | <i>Banksia serrata</i>  | Saw Banksia         | MS        |                 |         | yes      |
|                     |     |        | 500371   | <i>Bauera rubioides</i>   | Wiry Bauera         | SS        | yes             | yes     |          |
|                     |     | *      | 500384   | <i>Bellis perennis</i>  | English Daisy       | MH        | yes             | yes     | yes      |
|                     |     |        | 504291   | <i>Billardiera mutabilis</i>  | Common Apple-berry  | SC        | yes             | yes     | yes      |
|                     |     |        | 500404   | <i>Blechnum cartilagineum</i>   | Gristle Fern        | GF        |                 |         | yes      |
|                     |     |        | 500407   | <i>Blechnum minus</i>   | Soft Water-fern     | GF        | yes             | yes     | yes      |
|                     |     |        | 500408   | <i>Blechnum nudum</i>   | Fishbone Water-fern | GF        | yes             | yes     | yes      |
|                     |     |        | 501098   | <i>Blechnum parrisiae</i>   | Common Rasp-fern    | GF        | yes             | yes     | yes      |
|                     |     |        | 500409   | <i>Blechnum patersonii</i> subsp. <i>patersonii</i>                   | Strap Water-fern    | GF        | yes             |         |          |
|                     |     |        | 500413   | <i>Blechnum wattsii</i>   | Hard Water-fern     | GF        | yes             | yes     |          |
|                     |     |        | 500440   | <i>Bossiaea prostrata</i>   | Creeping Bossiaea   | PS        | yes             |         |          |
|                     |     | *      | 500500   | <i>Bromus diandrus</i>  | Great Brome         | MTG       |                 |         | yes      |
|                     |     | *      | 500501   | <i>Bromus hordeaceus</i>  | Soft Brome          | MTG       | yes             | yes     | yes      |
|                     |     |        | 500512   | <i>Burchardia umbellata</i>   | Milkmaids           | MH        | yes             | yes     | yes      |
|                     |     |        | 500515   | <i>Bursaria spinosa</i> subsp. <i>spinosa</i>                         | Sweet Bursaria      | MS        | yes             | yes     | yes      |
|                     |     |        | 504296   | <i>Bursaria spinosa</i> subsp. <i>spinosa</i> var. <i>macrophylla</i> | Tree Bursaria       | T         | yes             | yes     | yes      |
|                     |     |        | 500518   | <i>Caesia parviflora</i>  | Pale Grass-lily     | LH        |                 |         | yes      |
|                     |     | *      | 500521   | <i>Cakile maritima</i> subsp. <i>maritima</i>                         | Sea Rocket          | MH        | yes             | yes     | yes      |



| Conservation Status |     | Origin | Taxon ID | Scientific Name                                    | Common Name              | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|--|--------------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |  |                          |           | Northern        | Central | Southern |
|                     |     |        | 500955   | <i>Caladenia carnea sensu Entwisle (1994)</i>      | Pink Fingers             | MH        | yes             |         |          |
|                     |     |        | 500537   | <i>Caladenia latifolia</i>                         | Pink Fairies             | MH        |                 |         | yes      |
|                     |     | *      | 500574   | <i>Callitriche stagnalis</i>                       | Common Water-starwort    | SH        |                 |         | yes      |
|                     |     |        | 500887   | <i>Calochlaena dubia</i>                           | Common Ground-fern       | GF        | yes             | yes     | yes      |
|                     |     | *      | 500612   | <i>Cardamine flexuosa</i>                          | Wood Bitter-cress        | MH        | yes             | yes     | yes      |
|                     |     |        | 500623   | <i>Carex appressa</i>                              | Tall Sedge               | LTG       | yes             | yes     | yes      |
|                     |     |        | 500627   | <i>Carex breviculmis</i>                           | Common Grass-sedge       | MTG       | yes             | yes     | yes      |
|                     |     |        | 504672   | <i>Carex gunniana</i> var. <i>gunniana</i>         | Swamp Sedge              | MTG       | yes             |         |          |
|                     |     |        | 500657   | <i>Carpobrotus rossii</i>                          | Karkalla                 | SH        | yes             | yes     | yes      |
|                     |     |        | 500666   | <i>Cassinia aculeata</i> subsp. <i>aculeata</i>    | Common Cassinia          | MS        | yes             | yes     | yes      |
|                     |     |        | 500671   | <i>Cassytha glabella</i>                           | Slender Dodder-laurel    | SC        | yes             |         |          |
|                     |     |        | 500674   | <i>Cassytha pubescens</i> s.s.                     | Downy Dodder-laurel      | SC        | yes             |         |          |
|                     |     | *      | 502451   | <i>Cenchrus clandestinus</i>                       | Kikuyu                   | LNG       | yes             | yes     | yes      |
|                     |     | *      | 500702   | <i>Centaureum erythraea</i>                        | Common Centaury          | MH        |                 |         | yes      |
|                     |     |        | 500706   | <i>Centella cordifolia</i>                         | Centella                 | MH        |                 |         | yes      |
|                     |     |        | 500716   | <i>Centrolepis strigosa</i> subsp. <i>strigosa</i> | Hairy Centrolepis        | TTG       | yes             | yes     | yes      |
|                     |     | *      | 503679   | <i>Cestrum elegans</i>                             | Elegant Poison-berry     | MS        | yes             |         |          |
|                     |     |        | 500753   | <i>Chiloglottis curvicalvia</i>                    | Autumn Wasp-orchid       | MH        | yes             | yes     | yes      |
|                     |     | *      | 505405   | <i>Chlorophytum comosum</i>                        | Spider Plant             | MH        | yes             |         | yes      |
|                     |     |        | 501628   | <i>Chrysocephalum semipapposum</i>                 | Clustered Everlasting    | LH        | yes             |         |          |
|                     |     | *      | 500782   | <i>Cirsium vulgare</i>                             | Spear Thistle            | LH        | yes             | yes     | yes      |
|                     |     |        | 500788   | <i>Clematis aristata</i>                           | Mountain Clematis        | SC        | yes             | yes     | yes      |
|                     |     |        | 500789   | <i>Clematis glycinoides</i>                        | Forest Clematis          | SC        | yes             |         |          |
|                     |     |        | 507386   | <i>Clematis microphylla</i> s.s.                   | Small-leaved Clematis    | SC        | yes             | yes     | yes      |
|                     |     |        | 500801   | <i>Comesperma volubile</i>                         | Love Creeper             | SC        | yes             | yes     | yes      |
|                     |     |        | 500822   | <i>Coprosma quadrifida</i>                         | Prickly Currant-bush     | MS        | yes             | yes     | yes      |
|                     |     | *      | 500823   | <i>Coprosma repens</i>                             | Mirror Bush              | MS        | yes             | yes     | yes      |
|                     |     | *      | 504393   | <i>Cordyline australis</i>                         | New Zealand Cabbage-tree | P         | yes             |         | yes      |
|                     |     |        | 501626   | <i>Coronidium scorpioides</i> s.s.                 | Button Everlasting       | MH        | yes             | yes     | yes      |

| Conservation Status |     | Origin | Taxon ID | Scientific Name                                    | Common Name            | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|--|------------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |  |                        |           | Northern        | Central | Southern |
|                     |     |        | 500829   | <i>Correa alba</i>                                 | White Correa           | MS        |                 |         | yes      |
|                     |     | *      | 500825   | <i>Cortaderia seloana</i> subsp. <i>seloana</i>    | Pampas Grass           | LTG       |                 | yes     | yes      |
|                     |     |        | 500838   | <i>Corybas diemenicus</i> s.l.                     | Veined Helmet-orchid   | SH        |                 |         | yes      |
|                     |     |        | 508260   | <i>Corybas</i> spp.                                | Helmet Orchid          | SH        | yes             |         | yes      |
|                     |     |        | 500842   | <i>Corybas unguiculatus</i>                        | Small Pelican-orchid   | SH        |                 |         | yes      |
|                     |     | *      | 507114   | <i>Corymbia ficifolia</i>                          | Flowering Gum          | T         | yes             |         |          |
|                     |     |        | 500846   | <i>Cotula australis</i>                            | Common Cotula          | MH        | yes             |         | yes      |
|                     |     | *      | 500848   | <i>Cotula coronopifolia</i>                        | Water Buttons          | MH        | yes             | yes     | yes      |
|                     |     |        | 500860   | <i>Crassula decumbens</i> var. <i>decumbens</i>    | Spreading Crassula     | MH        | yes             |         |          |
|                     |     | *      | 505186   | <i>Crassula multicava</i> subsp. <i>multicava</i>  | Shade Crassula         | SH        | yes             |         |          |
|                     |     | *      | 504520   | <i>Crassula muscosa</i> var. <i>muscosa</i>        | Clubmoss Crassula      | MH        | yes             | yes     |          |
|                     |     | *      | 500875   | <i>Crococsmia X crocosmiiflora</i>                 | Montbretia             | MTG       | yes             | yes     | yes      |
|                     |     |        | 500895   | <i>Cyathea australis</i>                           | Rough Tree-fern        | TF        | yes             | yes     | yes      |
|                     |     | *      | 500906   | <i>Cynara cardunculus</i> subsp. <i>flavescens</i> | Artichoke Thistle      | LH        |                 |         | yes      |
|                     |     | *      | 504554   | <i>Cynodon dactylon</i> var. <i>dactylon</i>       | Couch                  | MNG       | yes             | yes     | yes      |
|                     |     | *      | 500948   | <i>Dactylis glomerata</i>                          | Cocksfoot              | MNG       |                 | yes     | yes      |
|                     |     | *      | 503148   | <i>Danthonia decumbens</i>                         | Heath Grass            | MTG       | yes             | yes     |          |
|                     |     |        | 500989   | <i>Daucus glochidiatus</i>                         | Australian Carrot      | MH        | yes             |         |          |
|                     |     |        | 500999   | <i>Daviesia ulicifolia</i>                         | Gorse Bitter-pea       | MS        | yes             |         |          |
|                     |     | *      | 503118   | <i>Delairea odorata</i>                            | Cape Ivy               | SC        | yes             | yes     | yes      |
|                     |     |        | 501023   | <i>Deyeuxia quadriseta</i>                         | Reed Bent-grass        | LTG       |                 | yes     |          |
|                     |     |        | 504412   | <i>Dianella brevicaulis</i>                        | Small-flower Flax-lily | MTG       |                 |         | yes      |
|                     |     |        | 501029   | <i>Dianella revoluta</i> s.l.                      | Black-anther Flax-lily | MTG       | yes             |         | yes      |
|                     |     |        | 505557   | <i>Dianella</i> sp. aff. <i>revoluta</i> (Coastal) | Coast Flax-lily        | MTG       | yes             | yes     | yes      |
|                     |     |        | 501030   | <i>Dianella tasmanica</i>                          | Tasman Flax-lily       | MTG       | yes             | yes     | yes      |
|                     |     |        | 501036   | <i>Dichondra repens</i>                            | Kidney-weed            | SH        | yes             | yes     | yes      |
|                     |     |        | 501039   | <i>Dicksonia antarctica</i>                        | Soft Tree-fern         | TF        | yes             | yes     | yes      |
|                     |     |        | 501051   | <i>Dillwynia glaberrima</i>                        | Smooth Parrot-pea      | SS        | yes             |         |          |
|                     |     |        | 501058   | <i>Dillwynia sericea</i>                           | Showy Parrot-pea       | SS        | yes             |         |          |



| Conservation Status |     | Origin | Taxon ID | Scientific Name                                 | Common Name            | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|---|------------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |   |                        |           | Northern        | Central | Southern |
|                     |     | *      | 505842   | <i>Dimorphotheca pluvialis</i>                  | Cape Marigold          | MH        | yes             |         |          |
|                     |     |        | 501063   | <i>Diplarrena moraea</i>                        | White Iris             | MTG       | yes             | yes     |          |
|                     |     | *      | 501069   | <i>Dipogon lignosus</i>                         | Common Dipogon         | SC        | yes             | yes     | yes      |
|                     |     |        | 501102   | <i>Drosera auriculata</i>                       | Tall Sundew            | MH        | yes             | yes     |          |
|                     |     |        | 501108   | <i>Drosera pygmaea</i>                          | Tiny Sundew            | SH        | yes             |         |          |
|                     |     | *      | 501128   | <i>Ehrharta erecta</i>                          | Panic Veldt-grass      | MTG       | yes             | yes     |          |
|                     |     |        | 501155   | <i>Empodisma minus</i>                          | Spreading Rope-rush    | MNG       | yes             |         |          |
|                     |     |        | 501165   | <i>Epacris impressa</i>                         | Common Heath           | MS        | yes             | yes     | yes      |
|                     |     |        | 501174   | <i>Epilobium billardioreanum</i>                | Variable Willow-herb   | LH        | yes             |         |          |
|                     |     |        | 501185   | <i>Eragrostis brownii</i>                       | Common Love-grass      | MTG       | yes             | yes     | yes      |
|                     |     | *      | 500812   | <i>Erigeron bonariensis</i>                     | Flaxleaf Fleabane      | LH        | yes             | yes     | yes      |
|                     |     | *      | 505295   | <i>Eriobotrya japonica</i>                      | Loquat                 | T         | yes             |         |          |
|                     |     | *      | 501254   | <i>Eucalyptus botryoides</i>                    | Southern Mahogany      | T         | yes             |         |          |
|                     | cr  |        | 501290   | <i>Eucalyptus kitsoniana</i>                    | Bog Gum                | T         |                 |         | yes      |
|                     |     |        | 501304   | <i>Eucalyptus obliqua</i>                       | Messmate Stringybark   | T         | yes             | yes     | yes      |
|                     |     |        | 501307   | <i>Eucalyptus ovata</i>                         | Swamp Gum              | T         | yes             | yes     |          |
|                     |     |        | 503828   | <i>Eucalyptus radiata</i> subsp. <i>radiata</i> | Narrow-leaf Peppermint | T         | yes             | yes     |          |
|                     |     |        | 501465   | <i>Euchiton involucratus</i> s.s.               | Star Cudweed           | MH        | yes             | yes     | yes      |
|                     |     |        | 501466   | <i>Euchiton japonicus</i> s.s.                  | Creeping Cudweed       | MH        | yes             | yes     | yes      |
|                     |     | *      | 501331   | <i>Euphorbia paralias</i>                       | Sea Spurge             | LH        | yes             | yes     | yes      |
|                     |     |        | 501353   | <i>Exocarpos strictus</i>                       | Pale-fruit Ballart     | MS        | yes             | yes     |          |
|                     |     |        | 501782   | <i>Ficinia nodosa</i>                           | Knobby Club-sedge      | MNG       | yes             | yes     | yes      |
|                     |     | *      | 505516   | <i>Ficus carica</i>                             | Fig                    | T         | yes             | yes     | yes      |
|                     |     | *      | 501370   | <i>Foeniculum vulgare</i>                       | Fennel                 | MH        | yes             |         |          |
|                     |     | *      | 508451   | <i>Fraxinus</i> spp.                            | Ash                    | T         | yes             |         |          |
|                     |     | *      | 501379   | <i>Fumaria bastardii</i>                        | Bastard's Fumitory     | SC        | yes             | yes     |          |
|                     |     |        | 501387   | <i>Gahnia clarkei</i>                           | Tall Saw-sedge         | LTG       | yes             | yes     |          |
|                     |     |        | 501395   | <i>Gahnia sieberiana</i>                        | Red-fruit Saw-sedge    | LTG       | yes             | yes     | yes      |
|                     |     | *      | 501402   | <i>Galium aparine</i>                           | Cleavers               | SC        | yes             | yes     | yes      |

| Conservation Status |     | Origin | Taxon ID | Scientific Name                                    | Common Name             | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|--|-------------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |  |                         |           | Northern        | Central | Southern |
|                     |     |        | 501413   | <i>Galium leiocarpum</i>                           | Maori Bedstraw          | SH        | yes             | yes     | yes      |
|                     |     | *      | 501371   | <i>Gazania linearis</i>                            | Gazania                 | MH        | yes             |         |          |
|                     |     |        | 501427   | <i>Geranium homeanum</i>                           | Rainforest Crane's-bill | LH        | yes             |         |          |
|                     |     | *      | 501428   | <i>Geranium molle</i>                              | Dove's Foot             | MH        | yes             | yes     | yes      |
|                     |     |        | 501431   | <i>Geranium potentilloides</i>                     | Soft Crane's-bill       | MH        | yes             | yes     | yes      |
|                     |     |        | 501441   | <i>Gleichenia microphylla</i>                      | Scrambling Coral-fern   | GF        | yes             | yes     | yes      |
|                     |     |        | 501445   | <i>Glossodia major</i>                             | Wax-lip Orchid          | MH        |                 |         | yes      |
|                     |     |        | 501455   | <i>Glycine clandestina</i>                         | Twining Glycine         | SC        | yes             | yes     | yes      |
|                     |     |        | 501484   | <i>Gonocarpus humilis</i>                          | Shade Raspwort          | MH        | yes             |         | yes      |
|                     |     |        | 503851   | <i>Gonocarpus micranthus</i>                       | Creeping Raspwort       | SH        | yes             | yes     | yes      |
|                     |     |        | 501489   | <i>Gonocarpus tetragynus</i>                       | Common Raspwort         | MH        | yes             | yes     | yes      |
|                     |     |        | 501507   | <i>Goodenia ovata</i>                              | Hop Goodenia            | MS        | yes             | yes     | yes      |
|                     |     |        | 501524   | <i>Gratiola peruviana</i>                          | Austral Brooklime       | MH        | yes             | yes     | yes      |
|                     |     | *      | 507154   | <i>Grevillea</i> spp./cv.                          | Grevillea (cultivated)  | SS        | yes             |         |          |
|                     |     |        | 500909   | <i>Hackelia latifolia</i>                          | Forest Hound's-tongue   | MH        | yes             | yes     | yes      |
|                     |     |        | 500910   | <i>Hackelia suaveolens</i>                         | Sweet Hound's-tongue    | MH        |                 |         | yes      |
|                     | en  |        | 505072   | <i>Hakea decurrens</i> subsp. <i>platytaenia</i>   | Coast Needlewood        | MS        | yes             |         |          |
|                     |     | *      | 505767   | <i>Hakea drupacea</i>                              | Sweet Hakea             | MS        |                 |         | yes      |
|                     |     | *      | 505747   | <i>Hakea laurina</i>                               | Pincushion Hakea        | MS        |                 |         | yes      |
|                     |     | *      | 0        | <i>Hebe</i> spp.                                   | Hebe                    | SS        |                 | yes     |          |
|                     |     | *      | 904055   | <i>Hedera hibernica</i>                            | Atlantic Ivy            | SC        | yes             | yes     | yes      |
|                     |     |        | 501600   | <i>Hedycarya angustifolia</i>                      | Austral Mulberry        | MS        | yes             | yes     | yes      |
|                     |     |        | 501619   | <i>Helichrysum leucopsidium</i>                    | Satin Everlasting       | LH        |                 | yes     | yes      |
|                     |     |        | 501654   | <i>Hemarthria uncinata</i> var. <i>uncinata</i>    | Mat Grass               | MNG       | yes             |         |          |
|                     |     |        | 501661   | <i>Hibbertia acicularis</i>                        | Prickly Guinea-flower   | SS        | yes             |         |          |
|                     |     |        | 501674   | <i>Hibbertia fasciculata</i> var. <i>prostrata</i> | Bundled Guinea-flower   | SS        |                 |         | yes      |
|                     |     |        | 501691   | <i>Histiopteris incisa</i>                         | Bat's Wing Fern         | GF        | yes             | yes     | yes      |
|                     |     | *      | 501692   | <i>Holcus lanatus</i>                              | Yorkshire Fog           | LNG       | yes             | yes     | yes      |
|                     |     | *      | 507181   | <i>Hydrangea macrophylla</i>                       | Hydrangea               | MS        |                 |         | yes      |



| Conservation Status |     | Origin | Taxon ID | Scientific Name  | Common Name           | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|--|-----------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |  |                       |           | Northern        | Central | Southern |
|                     |     |        | 501722   | <i>Hydrocotyle hirta</i>                                     | Hairy Pennywort       | MH        | yes             | yes     | yes      |
|                     |     |        | 501734   | <i>Hymenophyllum cupressiforme</i>                           | Common Filmy-fern     | E         | yes             |         |          |
|                     |     |        | 501743   | <i>Hypericum japonicum</i>                                   | Matted St John's Wort | SH        | yes             |         |          |
|                     |     | *      | 501748   | <i>Hypochaeris radicata</i>                                  | Flatweed              | MH        | yes             | yes     | yes      |
|                     |     |        | 501752   | <i>Hypolepis glandulifera</i>                                | Downy Ground-fern     | GF        | yes             | yes     | yes      |
|                     |     | *      | 501759   | <i>Ilex aquifolium</i>                                       | English Holly         | T         | yes             | yes     |          |
|                     |     |        | 501760   | <i>Imperata cylindrica</i>                                   | Blady Grass           | MTG       | yes             | yes     |          |
|                     |     | *      | 500936   | <i>Isolepis levynsiana</i>                                   | Tiny Flat-sedge       | TTG       | yes             |         |          |
|                     |     | *      | 501806   | <i>Juncus articulatus</i> subsp. <i>articulatus</i>          | Jointed Rush          | MTG       |                 |         | yes      |
|                     |     |        | 501810   | <i>Juncus bufonius</i>                                       | Toad Rush             | MTG       | yes             | yes     | yes      |
|                     |     | *      | 501813   | <i>Juncus capitatus</i>                                      | Capitate Rush         | MNG       | yes             |         |          |
|                     |     |        | 501826   | <i>Juncus kraussii</i> subsp. <i>australiensis</i>           | Sea Rush              | LNG       |                 |         | yes      |
|                     |     |        | 501830   | <i>Juncus pallidus</i>                                       | Pale Rush             | LTG       | yes             | yes     | yes      |
|                     |     |        | 501831   | <i>Juncus pauciflorus</i>                                    | Loose-flower Rush     | MTG       | yes             |         | yes      |
|                     |     |        | 501833   | <i>Juncus planifolius</i>                                    | Broad-leaf Rush       | MTG       | yes             | yes     | yes      |
|                     |     |        | 501835   | <i>Juncus procerus</i>                                       | Tall Rush             | LTG       |                 |         | yes      |
|                     |     | *      | 503820   | <i>Kniphofia uvaria</i>                                      | Red-hot Poker         | LH        | yes             | yes     | yes      |
|                     |     |        | 504221   | <i>Lachnagrostis billardierei</i> subsp. <i>billardierei</i> | Coast Blown-grass     | MTG       |                 |         | yes      |
|                     |     |        | 501863   | <i>Lagenophora stipitata</i> s.l.                            | Common Bottle-daisy   | MH        | yes             | yes     | yes      |
|                     |     |        | 501861   | <i>Lagenophora sublyrata</i>                                 | Slender Bottle-daisy  | MH        | yes             | yes     | yes      |
|                     |     | *      | 501864   | <i>Lagurus ovatus</i>  | Hare's-tail Grass     | MNG       | yes             | yes     | yes      |
|                     |     |        | 501876   | <i>Lastreopsis acuminata</i>                                 | Shiny Shield-fern     | GF        |                 | yes     |          |
|                     |     | *      | 508642   | <i>Lathyrus</i> spp.   | Pea                   | SC        | yes             | yes     |          |
|                     |     | *      | 501895   | <i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>           | Hairy Hawkbit         | MH        | yes             | yes     | yes      |
|                     |     |        | 501919   | <i>Lepidosperma elatius</i>                                  | Tall Sword-sedge      | LTG       | yes             | yes     |          |
|                     |     |        | 501922   | <i>Lepidosperma gladiatum</i>                                | Coast Sword-sedge     | MTG       | yes             | yes     |          |
|                     |     |        | 501923   | <i>Lepidosperma laterale</i>                                 | Variable Sword-sedge  | MTG       | yes             |         |          |
|                     |     |        | 504701   | <i>Lepidosperma laterale</i> var. <i>majus</i>               | Variable Sword-sedge  | LTG       | yes             | yes     | yes      |
|                     |     |        | 501917   | <i>Lepidosperma sieberi</i>                                  | Sandhill Sword-sedge  | MTG       | yes             |         |          |

| Conservation Status |     | Origin | Taxon ID | Scientific Name  | Common Name             | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|--|-------------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |  |                         |           | Northern        | Central | Southern |
|                     |     |        | 503884   | <i>Leptinella reptans</i> s.s.                         | Creeping Cotula         | SH        | yes             |         |          |
|                     |     |        | 501956   | <i>Leptospermum continentale</i>                       | Prickly Tea-tree        | MS        | yes             | yes     | yes      |
|                     |     |        | 501957   | <i>Leptospermum laevigatum</i>                         | Coast Tea-tree          | MS        | yes             | yes     | yes      |
|                     |     |        | 501961   | <i>Leptospermum myrsinoides</i>                        | Heath Tea-tree          | MS        | yes             |         |          |
|                     |     |        | 501972   | <i>Leucopogon australis</i>                            | Spike Beard-heath       | SS        | yes             |         |          |
|                     |     |        | 501987   | <i>Leucopogon parviflorus</i>                          | Coast Beard-heath       | MS        | yes             | yes     | yes      |
|                     |     |        | 501995   | <i>Leucopogon virgatus</i>                             | Common Beard-heath      | SS        | yes             |         |          |
|                     |     |        | 502014   | <i>Lindsaea linearis</i>                               | Screw Fern              | GF        | yes             |         |          |
|                     |     |        | 502024   | <i>Lobelia anceps</i>                                  | Angled Lobelia          | MH        | yes             | yes     | yes      |
|                     |     |        | 502042   | <i>Lomandra filiformis</i>                             | Wattle Mat-rush         | MTG       | yes             |         |          |
|                     |     |        | 504713   | <i>Lomandra longifolia</i> subsp. <i>exilis</i>        | Cluster-headed Mat-rush | LTG       | yes             | yes     | yes      |
|                     |     |        | 504714   | <i>Lomandra longifolia</i> subsp. <i>longifolia</i>    | Spiny-headed Mat-rush   | LTG       | yes             | yes     | yes      |
|                     |     |        | 502050   | <i>Lomatia fraseri</i>                                 | Tree Lomatia            | T         | yes             |         |          |
|                     |     | *      | 502053   | <i>Lonicera japonica</i>                               | Japanese Honeysuckle    | SC        |                 |         | yes      |
|                     |     |        | 503841   | <i>Luzula meridionalis</i>                             | Common Woodrush         | MTG       | yes             | yes     | yes      |
|                     |     | *      | 502078   | <i>Lycium ferocissimum</i>                             | African Box-thorn       | MS        |                 |         | yes      |
|                     |     |        | 502079   | <i>Lycopodium deuterodensum</i>                        | Bushy Clubmoss          | GF        | yes             |         | yes      |
|                     |     | *      | 500223   | <i>Lysimachia arvensis</i>                             | Pimpernel               | MH        | yes             | yes     | yes      |
|                     |     |        | 502092   | <i>Lythrum hyssopifolia</i>                            | Small Loosestrife       | MH        | yes             | yes     | yes      |
|                     |     |        | 500381   | <i>Machaerina tetragona</i>                            | Square Twig-sedge       | MNG       |                 |         | yes      |
|                     |     | *      | 502140   | <i>Medicago polymorpha</i>                             | Burr Medic              | SH        | yes             | yes     | yes      |
|                     | en  | #      | 502145   | <i>Melaleuca armillaris</i> subsp. <i>armillaris</i>   | Giant Honey-myrtle      | MS        | yes             |         | yes      |
|                     |     |        | 502147   | <i>Melaleuca ericifolia</i>                            | Swamp Paperbark         | MS        | yes             | yes     | yes      |
|                     |     | *      | 505854   | <i>Melaleuca hypericifolia</i>                         | Hillock Bush            | T         |                 |         | yes      |
|                     |     |        | 502153   | <i>Melaleuca squarrosa</i>                             | Scented Paperbark       | MS        | yes             | yes     | yes      |
|                     |     |        | 502179   | <i>Microlaena stipoides</i> var. <i>stipoides</i>      | Weeping Grass           | MNG       | yes             | yes     | yes      |
|                     |     |        | 502183   | <i>Microsorium pustulatum</i> subsp. <i>pustulatum</i> | Kangaroo Fern           | E         | yes             | yes     |          |
|                     |     |        | 502189   | <i>Microtis unifolia</i>                               | Common Onion-orchid     | LH        | yes             |         |          |
|                     |     |        | 504735   | <i>Mitrasacme pilosa</i> var. <i>pilosa</i>            | Hairy Mitrewort         | SH        | yes             |         |          |



| Conservation Status |     | Origin | Taxon ID | Scientific Name   | Common Name          | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|---|----------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |   |                      |           | Northern        | Central | Southern |
|                     | en  |        | 503859   | <i>Monotoca glauca</i>                                  | Currant-wood         | MS        | yes             | yes     | yes      |
|                     |     |        | 502220   | <i>Monotoca scoparia</i>                                | Prickly Broom-heath  | MS        | yes             |         |          |
|                     |     |        | 502225   | <i>Muehlenbeckia adpressa</i>                           | Climbing Lignum      | SC        | yes             | yes     | yes      |
|                     |     |        | 502239   | <i>Myoporum insulare</i>                                | Common Boobialla     | T         | yes             | yes     | yes      |
|                     |     | *      | 505282   | <i>Myosotis arvensis</i>                                | Field Forget-me-not  | MH        | yes             | yes     | yes      |
|                     |     |        | 502916   | <i>Myrsine howittiana</i>                               | Mutton-wood          | T         | yes             | yes     |          |
|                     |     |        | 502299   | <i>Olearia argophylla</i>                               | Musk Daisy-bush      | T         | yes             |         |          |
|                     |     |        | 502312   | <i>Olearia lirata</i>                                   | Snowy Daisy-bush     | MS        | yes             | yes     | yes      |
|                     |     |        | 502316   | <i>Olearia myrsinoides</i>                              | Silky Daisy-bush     | SS        | yes             |         |          |
|                     |     |        | 903618   | <i>Olearia phlogopappa</i> subsp. <i>insularis</i>      | Dusty Daisy-bush     | SS        |                 |         | yes      |
|                     |     |        | 504785   | <i>Olearia ramulosa</i> var. <i>ramulosa</i>            | Twiggy Daisy-bush    | SS        |                 |         | yes      |
|                     |     |        | 502381   | <i>Oxalis exilis</i>                                    | Shade Wood-sorrel    | SH        | yes             | yes     | yes      |
|                     |     | *      | 502387   | <i>Oxalis pes-caprae</i>                                | Soursob              | MH        | yes             | yes     | yes      |
|                     |     |        | 501616   | <i>Ozothamnus ferrugineus</i>                           | Tree Everlasting     | MS        | yes             | yes     | yes      |
|                     |     |        | 502399   | <i>Pandorea pandorana</i> subsp. <i>pandorana</i>       | Wonga Vine           | SC        | yes             | yes     | yes      |
|                     |     | *      | 502423   | <i>Parietaria judaica</i>                               | Wall Pellitory       | LH        | yes             |         |          |
|                     |     |        | 502426   | <i>Parsonsia brownii</i>                                | Twining Silkpod      | SC        |                 | yes     | yes      |
|                     |     | *      | 505286   | <i>Passiflora edulis</i>                                | Black Passion-fruit  | SC        | yes             |         | yes      |
|                     |     |        | 502437   | <i>Patersonia occidentalis</i> var. <i>occidentalis</i> | Long Purple-flag     | MTG       | yes             | yes     | yes      |
|                     |     |        | 502442   | <i>Pelargonium australe</i>                             | Austral Stork's-bill | LH        | yes             |         |          |
|                     |     |        | 502449   | <i>Pellaea falcata</i> s.l.                             | Sickle Fern          | GF        | yes             |         |          |
|                     |     |        | 502463   | <i>Persoonia juniperina</i>                             | Prickly Geebung      | MS        | yes             |         | yes      |
|                     |     |        | 502497   | <i>Phragmites australis</i>                             | Common Reed          | LNG       | yes             | yes     | yes      |
|                     |     |        | 502209   | <i>Phyllangium divergens</i>                            | Wiry Mitrewort       | SH        |                 |         | yes      |
|                     |     | *      | 502508   | <i>Physalis peruviana</i>                               | Cape Gooseberry      | SS        |                 |         | yes      |
|                     |     |        | 502523   | <i>Pimelea humilis</i>                                  | Common Rice-flower   | SS        | yes             |         |          |
|                     |     | *      | 502539   | <i>Pinus radiata</i>                                    | Radiata Pine         | T         |                 |         | yes      |
|                     |     |        | 502540   | <i>Pittosporum bicolor</i>                              | Banyalla             | T         | yes             | yes     | yes      |
|                     |     | #      | 502543   | <i>Pittosporum undulatum</i>                            | Sweet Pittosporum    | T         | yes             | yes     | yes      |

| Conservation Status |     | Origin | Taxon ID | Scientific Name                                       | Common Name              | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|---|--------------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |   |                          |           | Northern        | Central | Southern |
|                     |     | *      | 504821   | <i>Plantago coronopus</i> subsp. <i>coronopus</i>     | Buck's-horn Plantain     | MH        | yes             | yes     | yes      |
|                     |     |        | 502555   | <i>Plantago debilis</i>                               | Shade Plantain           | MH        | yes             | yes     |          |
|                     |     | *      | 502561   | <i>Plantago lanceolata</i>                            | Ribwort                  | LH        | yes             | yes     | yes      |
|                     |     |        | 528671   | <i>Platylobium parviflorum</i>                        | Narrow-leaf Flat-pea     | SS        | yes             |         |          |
|                     |     | *      | 504194   | <i>Plectranthus ciliatus</i>                          | African Spur-flower      | LH        | yes             |         |          |
|                     |     | *      | 502580   | <i>Poa annua</i> s.l.                                 | Annual Meadow-grass      | MTG       | yes             | yes     | yes      |
|                     |     |        | 504694   | <i>Poa labillardierei</i> var. <i>labillardierei</i>  | Common Tussock-grass     | MTG       | yes             | yes     | yes      |
|                     |     |        | 504833   | <i>Poa poiformis</i> var. <i>poiformis</i>            | Coast Tussock-grass      | MTG       | yes             | yes     | yes      |
|                     |     |        | 502610   | <i>Poa tenera</i>                                     | Slender Tussock-grass    | MNG       | yes             | yes     |          |
|                     |     |        | 502643   | <i>Polyscias sambucifolia</i>                         | Elderberry Panax         | MS        | yes             | yes     | yes      |
|                     |     |        | 502645   | <i>Polystichum proliferum</i>                         | Mother Shield-fern       | GF        | yes             | yes     | yes      |
|                     |     |        | 502650   | <i>Pomaderris aspera</i>                              | Hazel Pomaderris         | T         | yes             | yes     | yes      |
|                     |     |        | 502665   | <i>Pomaderris oraria</i> subsp. <i>oraria</i>         | Bassian Pomaderris       | MS        |                 |         | yes      |
|                     |     |        | 502683   | <i>Poranthera microphylla</i> s.l.                    | Small Poranthera         | MH        | yes             | yes     | yes      |
|                     |     |        | 504845   | <i>Prostanthera lasianthos</i> var. <i>lasianthos</i> | Victorian Christmas-bush | MS        | yes             | yes     | yes      |
|                     |     | *      | 502757   | <i>Prunella vulgaris</i>                              | Self-heal                | MH        | yes             | yes     | yes      |
|                     |     | *      | 502758   | <i>Prunus cerasifera</i>                              | Cherry Plum              | MS        | yes             |         | yes      |
|                     |     |        | 502777   | <i>Pteridium esculentum</i> subsp. <i>esculentum</i>  | Austral Bracken          | GF        | yes             | yes     | yes      |
|                     |     |        | 502779   | <i>Pteris tremula</i>                                 | Tender Brake             | GF        | yes             | yes     | yes      |
|                     |     |        | 502810   | <i>Pterostylis pedunculata</i>                        | Maroonhood               | MH        | yes             |         |          |
|                     |     |        | 502844   | <i>Pultenaea daphnoides</i>                           | Large-leaf Bush-pea      | MS        | yes             | yes     | yes      |
|                     |     |        | 502894   | <i>Ranunculus lappaceus</i>                           | Australian Buttercup     | MH        | yes             |         |          |
|                     |     |        | 502912   | <i>Ranunculus sessiliflorus</i>                       | Annual Buttercup         | MH        |                 |         | yes      |
|                     |     |        | 502927   | <i>Rhagodia candolleana</i> subsp. <i>candolleana</i> | Seaberry Saltbush        | MS        | yes             | yes     | yes      |
|                     |     | *      | 502959   | <i>Rubus anglocandicans</i>                           | Common Blackberry        | SC        | yes             | yes     | yes      |
|                     |     |        | 502956   | <i>Rubus parvifolius</i>                              | Small-leaf Bramble       | SC        | yes             | yes     | yes      |
|                     |     | *      | 502991   | <i>Salix X fragilis</i>                               | Crack Willow             | T         | yes             |         |          |
|                     |     |        | 502999   | <i>Sambucus gaudichaudiana</i>                        | White Elderberry         | MH        | yes             | yes     | yes      |
|                     |     |        | 503001   | <i>Samolus repens</i>                                 | Creeping Brookweed       | MH        |                 |         | yes      |



| Conservation Status |     | Origin | Taxon ID | Scientific Name  | Common Name                          | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|--|--------------------------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |  |                                      |           | Northern        | Central | Southern |
|                     |     |        | 503039   | <i>Schoenus apogon</i>                                 | Common Bog-sedge                     | MTG       | yes             | yes     | yes      |
|                     |     |        | 503048   | <i>Schoenus maschalinus</i>                            | Leafy Bog-sedge                      | MTG       | yes             | yes     | yes      |
|                     |     |        | 503102   | <i>Senecio biserratus</i>                              | Jagged Fireweed                      | MH        | yes             | yes     | yes      |
|                     |     |        | 503107   | <i>Senecio glomeratus</i>                              | Annual Fireweed                      | LH        | yes             | yes     | yes      |
|                     |     |        | 503111   | <i>Senecio hispidulus s.l.</i>                         | Rough Fireweed                       | LH        | yes             |         |          |
|                     |     | *      | 503113   | <i>Senecio jacobaea</i>                                | Ragwort                              | LH        | yes             |         |          |
|                     |     |        | 507541   | <i>Senecio linearifolius</i> var. <i>denticulatus</i>  | Fireweed Groundsel (eastern variant) | LH        | yes             |         |          |
|                     |     |        | 503119   | <i>Senecio minimus</i>                                 | Shrubby Fireweed                     | LH        | yes             | yes     | yes      |
|                     |     |        | 503120   | <i>Senecio odoratus</i>                                | Scented Groundsel                    | LH        | yes             |         | yes      |
|                     |     |        | 503149   | <i>Sigesbeckia orientalis</i> subsp. <i>orientalis</i> | Indian Weed                          | LH        | yes             |         |          |
|                     |     |        | 503169   | <i>Solanum aviculare</i>                               | Kangaroo Apple                       | MS        | yes             | yes     | yes      |
|                     |     |        | 503196   | <i>Solenogyne gunnii</i>                               | Hairy Solenogyne                     | MH        | yes             |         |          |
|                     |     | *      | 503203   | <i>Sonchus asper s.l.</i>                              | Rough Sow-thistle                    | LH        | yes             | yes     | yes      |
|                     |     | *      | 503204   | <i>Sonchus oleraceus</i>                               | Common Sow-thistle                   | LH        | yes             | yes     | yes      |
|                     |     |        | 503222   | <i>Spinifex sericeus</i>                               | Hairy Spinifex                       | MNG       | yes             | yes     |          |
|                     |     | *      | 503226   | <i>Sporobolus africanus</i>                            | Rat-tail Grass                       | MTG       | yes             | yes     | yes      |
|                     |     |        | 503244   | <i>Stackhousia monogyna s.l.</i>                       | Creamy Stackhousia                   | MH        | yes             |         |          |
|                     |     |        | 503250   | <i>Stellaria flaccida</i>                              | Forest Starwort                      | MH        | yes             | yes     | yes      |
|                     |     | *      | 503260   | <i>Stenotaphrum secundatum</i>                         | Buffalo Grass                        | MNG       | yes             | yes     | yes      |
|                     |     |        | 528632   | <i>Styliidium armeria</i> subsp. <i>armeria</i>        | Common Triggerplant                  | MTG       | yes             |         |          |
|                     |     |        | 500304   | <i>Styphelia humifusa</i>                              | Cranberry Heath                      | PS        | yes             |         |          |
|                     |     | #      | 500115   | <i>Syzygium smithii</i>                                | Lilly Pilly                          | T         | yes             |         | yes      |
|                     |     |        | 503343   | <i>Tetragonia implexicoma</i>                          | Bower Spinach                        | SC        | yes             | yes     | yes      |
|                     |     |        | 503344   | <i>Tetragonia tetragonioides</i>                       | New Zealand Spinach                  | SC        | yes             |         |          |
|                     |     |        | 503348   | <i>Tetrarrhena juncea</i>                              | Forest Wire-grass                    | LNG       | yes             | yes     | yes      |
|                     |     |        | 503351   | <i>Tetradlea ciliata</i>                               | Pink-bells                           | SS        | yes             |         | yes      |
|                     |     |        | 503368   | <i>Thelymitra flexuosa</i>                             | Twisted Sun-orchid                   | MH        | yes             |         |          |
|                     |     |        | 503370   | <i>Thelymitra holmesii s.l.</i>                        | Blue-star Sun-orchid                 | MH        | yes             |         |          |
|                     |     | *      | 500142   | <i>Thinopyrum junceaiforme</i>                         | Sea Wheat-grass                      | MNG       | yes             | yes     | yes      |

| Conservation Status |     | Origin | Taxon ID | Scientific Name                                     | Common Name            | Life Form | Management Unit |         |          |
|---------------------|-----|--------|----------|---|------------------------|-----------|-----------------|---------|----------|
| EPBC                | FFG |        |          |   |                        |           | Northern        | Central | Southern |
|                     |     |        | 503393   | <i>Threlkeldia diffusa</i>                          | Coast Bonefruit        | SH        |                 |         | yes      |
|                     |     |        | 503406   | <i>Todea barbara</i>                                | Austral King-fern      | TF        | yes             | yes     | yes      |
|                     |     | *      | 503416   | <i>Tradescantia fluminensis</i>                     | Wandering Jew          | SC        | yes             |         |          |
|                     |     | *      | 503435   | <i>Trifolium repens</i> var. <i>repens</i>          | White Clover           | SH        | yes             | yes     | yes      |
|                     |     |        | 503449   | <i>Triglochin striata</i>                           | Streaked Arrowgrass    | MNG       | yes             |         | yes      |
|                     |     |        | 503476   | <i>Urtica incisa</i>                                | Scrub Nettle           | LH        | yes             | yes     | yes      |
|                     |     | *      | 503491   | <i>Vellereophyton dealbatum</i>                     | White Cudweed          | MH        | yes             |         |          |
|                     |     | *      | 503502   | <i>Veronica arvensis</i>                            | Wall Speedwell         | MH        | yes             |         |          |
|                     |     |        | 503512   | <i>Veronica plebeia</i>                             | Trailing Speedwell     | MH        | yes             | yes     | yes      |
|                     |     | *      | 503524   | <i>Vinca major</i>                                  | Blue Periwinkle        | SC        | yes             | yes     | yes      |
|                     |     |        | 505058   | <i>Viola hederacea</i> sensu <i>Entwisle (1996)</i> | Ivy-leaf Violet        | MH        | yes             | yes     | yes      |
|                     |     |        | 503555   | <i>Wahlenbergia gracilentia s.l.</i>                | Annual Bluebell        | MH        |                 |         | yes      |
|                     |     | *      | 509245   | <i>Washingtonia</i> spp.                            | Fan Palm               | P         | yes             |         |          |
|                     |     | vu     | 503583   | <i>Wurmbea uniflora</i>                             | One-flower Early Nancy | MH        | yes             |         |          |
|                     |     |        | 503587   | <i>Xanthorrhoea australis</i>                       | Austral Grass-tree     | LTG       | yes             |         | yes      |
|                     |     |        | 503588   | <i>Xanthorrhoea minor</i> subsp. <i>lutea</i>       | Small Grass-tree       | LTG       | yes             |         |          |
|                     |     |        | 504561   | <i>Xanthosia dissecta s.s.</i>                      | Native Parsley         | PS        | yes             |         |          |
|                     |     |        | 503592   | <i>Xanthosia pilosa</i>                             | Woolly Xanthosia       | SS        | yes             |         | yes      |
|                     |     | *      | 509266   | <i>Yucca</i> spp.                                   | Yucca                  | T         |                 |         | yes      |
|                     |     | *      | 503599   | <i>Zantedeschia aethiopica</i>                      | White Arum-lily        | LH        | yes             | yes     | yes      |
|                     |     |        | 503601   | <i>Zieria arborescens</i> subsp. <i>arborescens</i> | Stinkwood              | T         | yes             | yes     | yes      |

Conservation status is as per the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999) and Flora and Fauna Guarantee Act 1988 (FFG Act 1988) - CR: Critically Endangered; EN: Endangered; and VU: Vulnerable. Acronyms shown in upper case reference the conservation status on the EPBC Act 1999; those in lower case reference the FFG Act 1988.

Taxon ID – as per the Department of Environment, Land Water and Planning Victorian Biodiversity Atlas (DELWP, 2022c)

Origin - an asterisk (\*) denotes species of exotic origin, and a hash (#) denotes those that are native, but where some stands may be alien.

Life Form – T: Understorey Tree or Large Shrub; MS: Medium Shrub; SS: Small Shrub; PS: Prostrate Shrub; SC: Scrambler or Climber; LNG: Large Non-Tufted Graminoid; LTG: Large Tufted Graminoid; MTG: Medium to Small Tufted Graminoid; MNG: Medium to Tiny Non-Tufted Graminoid; LH: Large Herb; MH: Medium Herb; SH: Small or Prostrate Herb; GF: Ground Fern; TF: Tree Fern; E: Epiphyte.



**APPENDIX 2 Flora species recorded within 100 metres of Walkerville Foreshore Reserve (collated from targeted survey and database records)**

**Table 21 Flora species recorded within 100 metres of Walkerville Foreshore Reserve (collated from target survey and database records)**

The following inventory comprises of flora previously recorded at the site and within 100 metres of the site boundary. Records for current study were yielded from the results of a targeted survey of Walkerville Foreshore Reserve that was completed from October - December 2023. The search parameter for database records was return all records that occur within the reserve boundary, and within a lineal distance of 100 metres of the reserve boundary. Note: references to the earliest and most recent database records pertain to those taxa documented within 100 metres of the reserve boundary; not within the reserve itself. The currency of database records within the reserve boundary is provided in the accompanying database. Note also, as the inventory comprises of both current and historic records, it is probable that some of the recorded taxa no longer persist.

| Conservation Status |     | Origin | Taxon ID | Scientific Name                                       | Common Name           | Life Form | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|--------|----------|---|-----------------------|-----------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG |        |          |   |                       |           | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |     | *      | 500031   | <i>Acacia elata</i>                                   | Cedar Wattle          | T         |                 |                 |                    | yes                  |
|                     |     | #      | 505128   | <i>Acacia longifolia</i>                              | Sallow Wattle         | T         |                 |                 |                    | yes                  |
|                     |     | #      | 500088   | <i>Acacia longifolia</i> subsp. <i>sophorae</i>       | Coast Wattle          | T         | yes             | 1997            | 2012               |                      |
|                     |     |        | 500057   | <i>Acacia melanoxylon</i>                             | Blackwood             | T         |                 |                 |                    | yes                  |
|                     |     |        | 500062   | <i>Acacia mucronata</i> subsp. <i>longifolia</i>      | Narrow-leaf Wattle    | MS        |                 |                 |                    | yes                  |
|                     |     |        | 500063   | <i>Acacia myrtifolia</i>                              | Myrtle Wattle         | MS        |                 |                 |                    | yes                  |
|                     |     |        | 500091   | <i>Acacia stricta</i>                                 | Hop Wattle            | MS        |                 |                 |                    | yes                  |
|                     |     |        | 500092   | <i>Acacia suaveolens</i>                              | Sweet Wattle          | MS        |                 |                 |                    | yes                  |
|                     |     |        | 500100   | <i>Acacia verticillata</i>                            | Prickly Moses         | MS        |                 | 1997            | 1997               |                      |
|                     |     |        | 504213   | <i>Acacia verticillata</i> subsp. <i>verticillata</i> | Prickly Moses         | MS        |                 |                 |                    | yes                  |
|                     |     |        | 500105   | <i>Acaena novae-zelandiae</i>                         | Bidgee-widgee         | MH        |                 | 1997            | 1997               | yes                  |
|                     |     |        | 508004   | <i>Acaena</i> spp.                                    | Sheep's Burr          | MH        | yes             | 1997            | 1997               |                      |
|                     |     | *      | 502966   | <i>Acetosella vulgaris</i>                            | Sheep Sorrel          | MH        |                 |                 |                    | yes                  |
|                     |     |        | 504439   | <i>Acianthus pusillus</i>                             | Small Mosquito-orchid | MH        |                 |                 |                    | yes                  |
|                     |     |        | 500122   | <i>Acrotriche prostrata</i>                           | Trailing Ground-berry | PS        |                 |                 |                    | yes                  |
|                     |     |        | 500123   | <i>Acrotriche serrulata</i>                           | Honey-pots            | PS        |                 |                 |                    | yes                  |
|                     |     |        | 500129   | <i>Adiantum aethiopicum</i>                           | Common Maidenhair     | GF        |                 |                 |                    | yes                  |
|                     |     | *      | 503638   | <i>Agapanthus praecox</i> subsp. <i>orientalis</i>    | Agapanthus            | LH        |                 |                 |                    | yes                  |
|                     |     | *      | 500153   | <i>Agrostis capillaris</i>                            | Brown-top Bent        | MTG       |                 |                 |                    | yes                  |
|                     |     | *      | 507694   | <i>Allium cepa</i>                                    | Onion                 | LH        |                 |                 |                    | yes                  |
|                     |     | *      | 500179   | <i>Allium triquetrum</i>                              | Angled Onion          | MH        |                 |                 |                    | yes                  |
|                     |     |        | 500677   | <i>Allocasuarina littoralis</i>                       | Black Sheoak          | T         |                 |                 |                    | yes                  |
|                     |     |        | 500683   | <i>Allocasuarina paludosa</i>                         | Scrub Sheoak          | MS        |                 |                 |                    | yes                  |

| Conservation Status |     | Origin | Taxon ID | Scientific Name  | Common Name         | Life Form | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|--------|----------|--|---------------------|-----------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG |        |          |  |                     |           | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |     |        | 508033   | <i>Allocasuarina</i> spp.                              | Sheoak              | T         |                 | 1997            | 1997               |                      |
|                     |     |        | 500685   | <i>Allocasuarina verticillata</i>                      | Drooping Sheoak     | T         | yes             | 1997            | 2012               | yes                  |
|                     |     |        | 500188   | <i>Alyxia buxifolia</i>                                | Sea Box             | MS        | yes             | 2012            | 2012               | yes                  |
|                     |     |        | 500206   | <i>Amperea xiphoclada</i> var. <i>xiphoclada</i>       | Broom Spurge        | SS        |                 | 1997            | 1997               | yes                  |
|                     |     |        | 500220   | <i>Amyema pendula</i>                                  | Drooping Mistletoe  | E         |                 |                 |                    | yes                  |
|                     |     | *      | 500236   | <i>Anthoxanthum odoratum</i>                           | Sweet Vernal-grass  | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 500237   | <i>Aotus ericoides</i>                                 | Common Aotus        | MS        |                 |                 |                    | yes                  |
|                     |     |        | 500247   | <i>Apium prostratum</i> subsp. <i>prostratum</i>       | Sea Celery          | SH        |                 |                 |                    | yes                  |
|                     |     | *      | 500255   | <i>Arctotheca calendula</i>                            | Cape Weed           | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 503644   | <i>Arum italicum</i> subsp. <i>italicum</i>            | Italian Cuckoo-pint | LH        |                 |                 |                    | yes                  |
|                     |     | *      | 500276   | <i>Asparagus scandens</i>                              | Asparagus Fern      | SC        |                 |                 |                    | yes                  |
|                     |     |        | 500288   | <i>Asplenium flabellifolium</i>                        | Necklace Fern       | GF        |                 |                 |                    | yes                  |
|                     |     |        | 500316   | <i>Atriplex cinerea</i>                                | Coast Saltbush      | MS        |                 |                 |                    | yes                  |
|                     |     |        | 500337   | <i>Australina pusilla</i> subsp. <i>muelleri</i>       | Shade Nettle        | MH        |                 |                 |                    | yes                  |
|                     |     |        | 503276   | <i>Austrostipa flavescens</i>                          | Coast Spear-grass   | LTG       |                 |                 |                    | yes                  |
|                     |     |        | 503293   | <i>Austrostipa stipoides</i>                           | Prickly Spear-grass | MTG       | yes             | 2012            | 2012               | yes                  |
|                     |     |        | 500362   | <i>Banksia integrifolia</i> subsp. <i>integrifolia</i> | Coast Banksia       | T         | yes             | 1997            | 2012               | yes                  |
|                     |     |        | 500363   | <i>Banksia marginata</i>                               | Silver Banksia      | MS        |                 |                 |                    | yes                  |
|                     |     |        | 500366   | <i>Banksia serrata</i>                                 | Saw Banksia         | MS        |                 |                 |                    | yes                  |
|                     |     |        | 500371   | <i>Bauera rubioides</i>                                | Wiry Bauera         | SS        |                 |                 |                    | yes                  |
|                     |     | *      | 500384   | <i>Bellis perennis</i>                                 | English Daisy       | MH        |                 |                 |                    | yes                  |
|                     |     |        | 504291   | <i>Billardiera mutabilis</i>                           | Common Apple-berry  | SC        |                 |                 |                    | yes                  |
|                     |     |        | 500404   | <i>Blechnum cartilagineum</i>                          | Gristle Fern        | GF        |                 |                 |                    | yes                  |
|                     |     |        | 500407   | <i>Blechnum minus</i>                                  | Soft Water-fern     | GF        | yes             | 1997            | 1997               | yes                  |
|                     |     |        | 500408   | <i>Blechnum nudum</i>                                  | Fishbone Water-fern | GF        |                 |                 |                    | yes                  |
|                     |     |        | 501098   | <i>Blechnum parrisiae</i>                              | Common Rasp-fern    | GF        |                 |                 |                    | yes                  |
|                     |     |        | 500409   | <i>Blechnum patersonii</i> subsp. <i>patersonii</i>    | Strap Water-fern    | GF        |                 |                 |                    | yes                  |



| Conservation Status |            | Origin | Taxon ID | Scientific Name   | Common Name           | Life Form | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|------------|--------|----------|---|-----------------------|-----------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG        |        |          |   |                       |           | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |            |        | 500413   | <i>Blechnum watsii</i>  | Hard Water-fern       | GF        |                 |                 |                    | yes                  |
|                     |            |        | 500440   | <i>Bossiaea prostrata</i>   | Creeping Bossiaea     | PS        |                 |                 |                    | yes                  |
|                     |            | *      | 500500   | <i>Bromus diandrus</i>  | Great Brome           | MTG       |                 |                 |                    | yes                  |
|                     |            | *      | 500501   | <i>Bromus hordeaceus</i>  | Soft Brome            | MTG       |                 |                 |                    | yes                  |
|                     |            |        | 500512   | <i>Burchardia umbellata</i>   | Milkmaids             | MH        |                 |                 |                    | yes                  |
|                     |            |        | 500515   | <i>Bursaria spinosa</i> subsp. <i>spinosa</i>                         | Sweet Bursaria        | MS        | yes             | 1997            | 2012               | yes                  |
|                     |            |        | 504296   | <i>Bursaria spinosa</i> subsp. <i>spinosa</i> var. <i>macrophylla</i> | Tree Bursaria         | T         |                 |                 |                    | yes                  |
|                     |            |        | 500518   | <i>Caesia parviflora</i>  | Pale Grass-lily       | LH        |                 |                 |                    | yes                  |
|                     |            | *      | 500521   | <i>Cakile maritima</i> subsp. <i>maritima</i>                         | Sea Rocket            | MH        |                 |                 |                    | yes                  |
|                     |            |        | 500955   | <i>Caladenia carnea</i> sensu Entwisle (1994)                         | Pink Fingers          | MH        |                 |                 |                    | yes                  |
|                     |            |        | 500537   | <i>Caladenia latifolia</i>  | Pink Fairies          | MH        |                 |                 |                    | yes                  |
|                     |            | *      | 500574   | <i>Callitriche stagnalis</i>  | Common Water-starwort | SH        |                 |                 |                    | yes                  |
|                     |            |        | 500887   | <i>Calochlaena dubia</i>  | Common Ground-fern    | GF        |                 | 1997            | 1997               | yes                  |
|                     | Endangered |        | 500606   | <i>Calystegia soldanella</i>  | Sea Bindweed          | SC        |                 | 2009            | 2009               |                      |
|                     |            | *      | 500612   | <i>Cardamine flexuosa</i>   | Wood Bitter-cress     | MH        |                 |                 |                    | yes                  |
|                     |            |        | 500623   | <i>Carex appressa</i>   | Tall Sedge            | LTG       |                 |                 |                    | yes                  |
|                     |            |        | 500627   | <i>Carex breviculmis</i>  | Common Grass-sedge    | MTG       |                 |                 |                    | yes                  |
|                     |            |        | 504672   | <i>Carex gunniana</i> var. <i>gunniana</i>                            | Swamp Sedge           | MTG       |                 |                 |                    | yes                  |
|                     |            |        | 500657   | <i>Carpobrotus rossii</i>   | Karkalla              | SH        |                 |                 |                    | yes                  |
|                     |            |        | 500666   | <i>Cassinia aculeata</i> subsp. <i>aculeata</i>                       | Common Cassinia       | MS        |                 |                 |                    | yes                  |
|                     |            |        | 500671   | <i>Cassytha glabella</i>  | Slender Dodder-laurel | SC        |                 |                 |                    | yes                  |
|                     |            |        | 500674   | <i>Cassytha pubescens</i> s.s.  | Downy Dodder-laurel   | SC        |                 |                 |                    | yes                  |
|                     |            |        | 508201   | <i>Cassytha</i> spp.  | Dodder Laurel         | SC        |                 | 1997            | 1997               |                      |
|                     |            | *      | 502451   | <i>Cenchrus clandestinus</i>  | Kikuyu                | LNG       |                 |                 |                    | yes                  |
|                     |            | *      | 500702   | <i>Centaurium erythraea</i>   | Common Centaury       | MH        |                 |                 |                    | yes                  |
|                     |            |        | 500706   | <i>Centella cordifolia</i>  | Centella              | MH        |                 |                 |                    | yes                  |
|                     |            |        | 500716   | <i>Centrolepis strigosa</i> subsp. <i>strigosa</i>                    | Hairy Centrolepis     | TTG       |                 |                 |                    | yes                  |
|                     |            | *      | 503679   | <i>Cestrum elegans</i>  | Elegant Poison-berry  | MS        |                 |                 |                    | yes                  |
|                     |            |        | 500753   | <i>Chiloglottis curvicalvia</i>                                       | Autumn Wasp-orchid    | MH        |                 |                 |                    | yes                  |

| Conservation Status |     | Origin | Taxon ID | Scientific Name                                    | Common Name              | Life Form | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|--------|----------|--|--------------------------|-----------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG |        |          |  |                          |           | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |     | *      | 505405   | <i>Chlorophytum comosum</i>                        | Spider Plant             | MH        |                 |                 |                    | yes                  |
|                     |     |        | 501628   | <i>Chrysocephalum semipapposum</i>                 | Clustered Everlasting    | LH        |                 |                 |                    | yes                  |
|                     |     | *      | 500782   | <i>Cirsium vulgare</i>                             | Spear Thistle            | LH        |                 |                 |                    | yes                  |
|                     |     |        | 500788   | <i>Clematis aristata</i>                           | Mountain Clematis        | SC        |                 |                 |                    | yes                  |
|                     |     |        | 500789   | <i>Clematis glycinoides</i>                        | Forest Clematis          | SC        | yes             | 2012            | 2012               | yes                  |
|                     |     |        | 507386   | <i>Clematis microphylla</i> s.s.                   | Small-leaved Clematis    | SC        |                 |                 |                    | yes                  |
|                     |     |        | 508243   | <i>Clematis</i> spp.                               | Clematis                 | SC        | yes             | 1997            | 1997               |                      |
|                     |     |        | 500801   | <i>Comesperma volubile</i>                         | Love Creeper             | SC        |                 |                 |                    | yes                  |
|                     |     |        | 500822   | <i>Coprosma quadrifida</i>                         | Prickly Currant-bush     | MS        | yes             | 1997            | 2012               | yes                  |
|                     |     | *      | 500823   | <i>Coprosma repens</i>                             | Mirror Bush              | MS        |                 | 2012            | 2012               | yes                  |
|                     |     | *      | 504393   | <i>Cordyline australis</i>                         | New Zealand Cabbage-tree | P         |                 |                 |                    | yes                  |
|                     |     |        | 501626   | <i>Coronidium scorpioides</i> s.s.                 | Button Everlasting       | MH        |                 |                 |                    | yes                  |
|                     |     |        | 500829   | <i>Correa alba</i>                                 | White Correa             | MS        | yes             | 2012            | 2020               | yes                  |
|                     |     | *      | 500825   | <i>Cortaderia selloana</i> subsp. <i>selloana</i>  | Pampas Grass             | LTG       |                 |                 |                    | yes                  |
|                     |     |        | 500838   | <i>Corybas diemenicus</i> s.l.                     | Veined Helmet-orchid     | SH        |                 |                 |                    | yes                  |
|                     |     |        | 508260   | <i>Corybas</i> spp.                                | Helmet Orchid            | SH        |                 |                 |                    | yes                  |
|                     |     |        | 500842   | <i>Corybas unguiculatus</i>                        | Small Pelican-orchid     | SH        |                 |                 |                    | yes                  |
|                     |     | *      | 507114   | <i>Corymbia ficifolia</i>                          | Flowering Gum            | T         |                 |                 |                    | yes                  |
|                     |     |        | 500846   | <i>Cotula australis</i>                            | Common Cotula            | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 500848   | <i>Cotula coronopifolia</i>                        | Water Buttons            | MH        |                 |                 |                    | yes                  |
|                     |     |        | 500860   | <i>Crassula decumbens</i> var. <i>decumbens</i>    | Spreading Crassula       | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 505186   | <i>Crassula multicava</i> subsp. <i>multicava</i>  | Shade Crassula           | SH        |                 |                 |                    | yes                  |
|                     |     | *      | 504520   | <i>Crassula muscosa</i> var. <i>muscosa</i>        | Clubmoss Crassula        | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 500875   | <i>Crocasmia X crocosmiiflora</i>                  | Montbretia               | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 500895   | <i>Cyathea australis</i>                           | Rough Tree-fern          | TF        | yes             | 1997            | 1997               | yes                  |
|                     |     | *      | 500906   | <i>Cynara cardunculus</i> subsp. <i>flavescens</i> | Artichoke Thistle        | LH        |                 |                 |                    | yes                  |
|                     |     | *      | 504554   | <i>Cynodon dactylon</i> var. <i>dactylon</i>       | Couch                    | MNG       |                 |                 |                    | yes                  |
|                     |     | *      | 500948   | <i>Dactylis glomerata</i>                          | Cocksfoot                | MNG       |                 |                 |                    | yes                  |
|                     |     | *      | 503148   | <i>Danthonia decumbens</i>                         | Heath Grass              | MTG       |                 |                 |                    | yes                  |



| Conservation Status |                       | Origin | Taxon ID | Scientific Name                             | Common Name            | Life Form | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----------------------|--------|----------|---|------------------------|-----------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG                   |        |          |   |                        |           | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |                       |        | 500989   | <i>Daucus glochidiatus</i>                  | Australian Carrot      | MH        |                 |                 |                    | yes                  |
|                     |                       |        | 500999   | <i>Daviesia ulicifolia</i>                  | Gorse Bitter-pea       | MS        |                 |                 |                    | yes                  |
|                     |                       | *      | 503118   | <i>Delairea odorata</i>                     | Cape Ivy               | SC        |                 |                 |                    | yes                  |
|                     |                       |        | 501023   | <i>Deyeuxia quadriseta</i>                  | Reed Bent-grass        | LTG       |                 |                 |                    | yes                  |
|                     |                       |        | 504412   | <i>Dianella brevicaulis</i>                 | Small-flower Flax-lily | MTG       | yes             | 2012            | 2012               | yes                  |
|                     |                       |        | 501029   | <i>Dianella revoluta s.l.</i>               | Black-anther Flax-lily | MTG       |                 |                 |                    | yes                  |
|                     |                       |        | 505557   | <i>Dianella sp. aff. revoluta (Coastal)</i> | Coast Flax-lily        | MTG       |                 |                 |                    | yes                  |
|                     |                       |        | 501030   | <i>Dianella tasmanica</i>                   | Tasman Flax-lily       | MTG       | yes             | 1997            | 1997               | yes                  |
|                     |                       |        | 501036   | <i>Dichondra repens</i>                     | Kidney-weed            | SH        | yes             | 1997            | 1997               | yes                  |
|                     |                       |        | 501039   | <i>Dicksonia antarctica</i>                 | Soft Tree-fern         | TF        |                 |                 |                    | yes                  |
|                     |                       |        | 501051   | <i>Dillwynia glaberrima</i>                 | Smooth Parrot-pea      | SS        |                 |                 |                    | yes                  |
|                     |                       |        | 501058   | <i>Dillwynia sericea</i>                    | Showy Parrot-pea       | SS        |                 |                 |                    | yes                  |
|                     |                       | *      | 505842   | <i>Dimorphotheca pluvialis</i>              | Cape Marigold          | MH        |                 |                 |                    | yes                  |
|                     |                       |        | 501063   | <i>Diplarrena moraea</i>                    | White Iris             | MTG       | yes             | 1997            | 1997               | yes                  |
|                     |                       | *      | 501069   | <i>Dipogon lignosus</i>                     | Common Dipogon         | SC        |                 |                 |                    | yes                  |
|                     |                       |        | 501102   | <i>Drosera auriculata</i>                   | Tall Sundew            | MH        |                 |                 |                    | yes                  |
|                     |                       |        | 501108   | <i>Drosera pygmaea</i>                      | Tiny Sundew            | SH        |                 |                 |                    | yes                  |
|                     |                       | *      | 501128   | <i>Ehrharta erecta</i>                      | Panic Veldt-grass      | MTG       |                 |                 |                    | yes                  |
|                     |                       |        | 501155   | <i>Empodisma minus</i>                      | Spreading Rope-rush    | MNG       |                 |                 |                    | yes                  |
|                     |                       |        | 501165   | <i>Epacris impressa</i>                     | Common Heath           | MS        |                 | 1997            | 1997               | yes                  |
|                     |                       |        | 501174   | <i>Epilobium billardioreanum</i>            | Variable Willow-herb   | LH        |                 |                 |                    | yes                  |
|                     |                       |        | 501185   | <i>Eragrostis brownii</i>                   | Common Love-grass      | MTG       |                 |                 |                    | yes                  |
|                     |                       | *      | 500812   | <i>Erigeron bonariensis</i>                 | Flaxleaf Fleabane      | LH        |                 |                 |                    | yes                  |
|                     |                       | *      | 505295   | <i>Eriobotrya japonica</i>                  | Loquat                 | T         |                 |                 |                    | yes                  |
|                     |                       | *      | 501254   | <i>Eucalyptus botryoides</i>                | Southern Mahogany      | T         |                 |                 |                    | yes                  |
|                     | Critically Endangered |        | 501290   | <i>Eucalyptus kitsoniana</i>                | Bog Gum                | T         |                 |                 |                    | yes                  |
|                     |                       |        | 501304   | <i>Eucalyptus obliqua</i>                   | Messmate Stringybark   | T         | yes             | 1997            | 1997               | yes                  |
|                     |                       |        | 501307   | <i>Eucalyptus ovata</i>                     | Swamp Gum              | T         |                 | 1997            | 1997               | yes                  |

| Conservation Status |     | Origin | Taxon ID | Scientific Name                                 | Common Name             | Life Form | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|--------|----------|---|-------------------------|-----------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG |        |          |   |                         |           | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |     |        | 501313   | <i>Eucalyptus radiata s.l.</i>                  | Narrow-leaf Peppermint  | T         |                 | 1997            | 1997               |                      |
|                     |     |        | 503828   | <i>Eucalyptus radiata</i> subsp. <i>radiata</i> | Narrow-leaf Peppermint  | T         |                 |                 |                    | yes                  |
|                     |     |        | 501465   | <i>Euchiton involucratus s.s.</i>               | Star Cudweed            | MH        |                 |                 |                    | yes                  |
|                     |     |        | 501466   | <i>Euchiton japonicus s.s.</i>                  | Creeping Cudweed        | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 501331   | <i>Euphorbia paralias</i>                       | Sea Spurge              | LH        |                 |                 |                    | yes                  |
|                     |     |        | 501353   | <i>Exocarpos strictus</i>                       | Pale-fruit Ballart      | MS        |                 |                 |                    | yes                  |
|                     |     |        | 501782   | <i>Ficinia nodosa</i>                           | Knobby Club-sedge       | MNG       |                 |                 |                    | yes                  |
|                     |     | *      | 505516   | <i>Ficus carica</i>                             | Fig                     | T         |                 |                 |                    | yes                  |
|                     |     | *      | 501370   | <i>Foeniculum vulgare</i>                       | Fennel                  | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 508451   | <i>Fraxinus</i> spp.                            | Ash                     | T         |                 |                 |                    | yes                  |
|                     |     | *      | 501379   | <i>Fumaria bastardii</i>                        | Bastard's Fumitory      | SC        |                 |                 |                    | yes                  |
|                     |     |        | 501387   | <i>Gahnia clarkei</i>                           | Tall Saw-sedge          | LTG       |                 |                 |                    | yes                  |
|                     |     |        | 501395   | <i>Gahnia sieberiana</i>                        | Red-fruit Saw-sedge     | LTG       |                 |                 |                    | yes                  |
|                     |     | *      | 501402   | <i>Galium aparine</i>                           | Cleavers                | SC        |                 | 1997            | 1997               | yes                  |
|                     |     |        | 501413   | <i>Galium leiocarpum</i>                        | Maori Bedstraw          | SH        |                 |                 |                    | yes                  |
|                     |     |        | 508464   | <i>Galium</i> spp.                              | Bedstraw                | SC        |                 | 1997            | 1997               |                      |
|                     |     | *      | 501371   | <i>Gazania linearis</i>                         | Gazania                 | MH        |                 |                 |                    | yes                  |
|                     |     |        | 501427   | <i>Geranium homeanum</i>                        | Rainforest Crane's-bill | LH        |                 |                 |                    | yes                  |
|                     |     | *      | 501428   | <i>Geranium molle</i>                           | Dove's Foot             | MH        |                 |                 |                    | yes                  |
|                     |     |        | 501431   | <i>Geranium potentilloides</i>                  | Soft Crane's-bill       | MH        |                 |                 |                    | yes                  |
|                     |     |        | 508474   | <i>Geranium</i> spp.                            | Crane's Bill            | MH        |                 | 1997            | 1997               |                      |
|                     |     |        | 501441   | <i>Gleichenia microphylla</i>                   | Scrambling Coral-fern   | GF        |                 |                 |                    | yes                  |
|                     |     |        | 501445   | <i>Glossodia major</i>                          | Wax-lip Orchid          | MH        |                 |                 |                    | yes                  |
|                     |     |        | 501455   | <i>Glycine clandestina</i>                      | Twining Glycine         | SC        |                 |                 |                    | yes                  |
|                     |     |        | 501484   | <i>Gonocarpus humilis</i>                       | Shade Raspwort          | MH        |                 |                 |                    | yes                  |
|                     |     |        | 503851   | <i>Gonocarpus micranthus</i>                    | Creeping Raspwort       | SH        |                 |                 |                    | yes                  |
|                     |     |        | 508491   | <i>Gonocarpus</i> spp.                          | Raspwort                | H         |                 | 1997            | 1997               |                      |
|                     |     |        | 501489   | <i>Gonocarpus tetragynus</i>                    | Common Raspwort         | MH        |                 |                 |                    | yes                  |
|                     |     |        | 504882   | <i>Gonocarpus teucrioides s.s.</i>              | Germander Raspwort      | MH        | yes             | 2012            | 2012               |                      |



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|                     |            |        | 501507   | <i>Goodenia ovata</i>                               | Hop Goodenia           | MS        | yes             | 1997            | 2012               | yes                  |
|                     |            |        | 501524   | <i>Grotiola peruviana</i>                           | Austral Brooklime      | MH        |                 |                 |                    | yes                  |
|                     |            | *      | 507154   | <i>Grevillea</i> spp./cv.                           | Grevillea (cultivated) | SS        |                 |                 |                    | yes                  |
|                     |            |        | 500909   | <i>Hackelia latifolia</i>                           | Forest Hound's-tongue  | MH        |                 |                 |                    | yes                  |
|                     |            |        | 500910   | <i>Hackelia suaveolens</i>                          | Sweet Hound's-tongue   | MH        |                 |                 |                    | yes                  |
|                     | Endangered |        | 505072   | <i>Hakea decurrens</i> subsp. <i>platytaenia</i>    | Coast Needlewood       | MS        |                 |                 |                    | yes                  |
|                     |            | *      | 505767   | <i>Hakea drupacea</i>                               | Sweet Hakea            | MS        |                 |                 |                    | yes                  |
|                     |            | *      | 505747   | <i>Hakea laurina</i>                                | Pincushion Hakea       | MS        |                 |                 |                    | yes                  |
|                     |            | *      | -        | <i>Hebe</i> spp.                                    | Hebe                   | SS        |                 |                 |                    | yes                  |
|                     |            | *      | 904055   | <i>Hedera hibernica</i>                             | Atlantic Ivy           | SC        |                 |                 |                    | yes                  |
|                     |            |        | 501600   | <i>Hedycarya angustifolia</i>                       | Austral Mulberry       | MS        | yes             | 1997            | 1997               | yes                  |
|                     |            |        | 501619   | <i>Helichrysum leucopsidium</i>                     | Satin Everlasting      | LH        |                 |                 |                    | yes                  |
|                     |            |        | 501654   | <i>Hemarthria uncinata</i> var. <i>uncinata</i>     | Mat Grass              | MNG       |                 |                 |                    | yes                  |
|                     |            |        | 501661   | <i>Hibbertia acicularis</i>                         | Prickly Guinea-flower  | SS        |                 |                 |                    | yes                  |
|                     |            |        | 501674   | <i>Hibbertia fasciculata</i> var. <i>prostrata</i>  | Bundled Guinea-flower  | SS        |                 |                 |                    | yes                  |
|                     |            |        | 501684   | <i>Hibbertia virgata</i>                            | Twiggy Guinea-flower   | SS        |                 | 1997            | 1997               |                      |
|                     |            |        | 501691   | <i>Histiopteris incisa</i>                          | Bat's Wing Fern        | GF        |                 |                 |                    | yes                  |
|                     |            | *      | 501692   | <i>Holcus lanatus</i>                               | Yorkshire Fog          | LNG       |                 |                 |                    | yes                  |
|                     |            | *      | 507181   | <i>Hydrangea macrophylla</i>                        | Hydrangea              | MS        |                 |                 |                    | yes                  |
|                     |            |        | 501722   | <i>Hydrocotyle hirta</i>                            | Hairy Pennywort        | MH        |                 |                 |                    | yes                  |
|                     |            |        | 501734   | <i>Hymenophyllum cupressiforme</i>                  | Common Filmy-fern      | E         |                 |                 |                    | yes                  |
|                     |            |        | 501743   | <i>Hypericum japonicum</i>                          | Matted St John's Wort  | SH        |                 |                 |                    | yes                  |
|                     |            | *      | 501748   | <i>Hypochaeris radicata</i>                         | Flatweed               | MH        |                 |                 |                    | yes                  |
|                     |            |        | 501752   | <i>Hypolepis glandulifera</i>                       | Downy Ground-fern      | GF        |                 |                 |                    | yes                  |
|                     |            | *      | 501759   | <i>Ilex aquifolium</i>                              | English Holly          | T         |                 |                 |                    | yes                  |
|                     |            |        | 501760   | <i>Imperata cylindrica</i>                          | Blady Grass            | MTG       |                 |                 |                    | yes                  |
|                     |            | *      | 500936   | <i>Isolepis levynsiana</i>                          | Tiny Flat-sedge        | TTG       |                 |                 |                    | yes                  |
|                     |            | *      | 501806   | <i>Juncus articulatus</i> subsp. <i>articulatus</i> | Jointed Rush           | MTG       |                 |                 |                    | yes                  |
|                     |            |        | 501810   | <i>Juncus bufonius</i>                              | Toad Rush              | MTG       |                 |                 |                    | yes                  |

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|                     |     | *      | 501813   | <i>Juncus capitatus</i>                                      | Capitate Rush        | MNG       |                 |                 |                    | yes                  |
|                     |     |        | 501826   | <i>Juncus kraussii</i> subsp. <i>australiensis</i>           | Sea Rush             | LNG       |                 |                 |                    | yes                  |
|                     |     |        | 501830   | <i>Juncus pallidus</i>                                       | Pale Rush            | LTG       |                 |                 |                    | yes                  |
|                     |     |        | 501831   | <i>Juncus pauciflorus</i>                                    | Loose-flower Rush    | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 501833   | <i>Juncus planifolius</i>                                    | Broad-leaf Rush      | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 501835   | <i>Juncus procerus</i>                                       | Tall Rush            | LTG       |                 |                 |                    | yes                  |
|                     |     | *      | 503820   | <i>Kniphofia uvaria</i>                                      | Red-hot Poker        | LH        |                 |                 |                    | yes                  |
|                     |     |        | 504221   | <i>Lachnagrostis billardierei</i> subsp. <i>billardierei</i> | Coast Blown-grass    | MTG       | yes             | 1999            | 1999               | yes                  |
|                     |     |        | 501863   | <i>Lagenophora stipitata</i> s.l.                            | Common Bottle-daisy  | MH        |                 |                 |                    | yes                  |
|                     |     |        | 501861   | <i>Lagenophora sublyrata</i>                                 | Slender Bottle-daisy | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 501864   | <i>Lagurus ovatus</i>  | Hare's-tail Grass    | MNG       |                 |                 |                    | yes                  |
|                     |     |        | 501876   | <i>Lastreopsis acuminata</i>                                 | Shiny Shield-fern    | GF        |                 |                 |                    | yes                  |
|                     |     | *      | 508642   | <i>Lathyrus</i> spp.   | Pea                  | SC        |                 |                 |                    | yes                  |
|                     |     | *      | 501895   | <i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>           | Hairy Hawkbit        | MH        |                 |                 |                    | yes                  |
|                     |     |        | 501919   | <i>Lepidosperma elatius</i>                                  | Tall Sword-sedge     | LTG       | yes             | 1997            | 1997               | yes                  |
|                     |     |        | 501922   | <i>Lepidosperma gladiatum</i>                                | Coast Sword-sedge    | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 501923   | <i>Lepidosperma laterale</i>                                 | Variable Sword-sedge | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 504701   | <i>Lepidosperma laterale</i> var. <i>majus</i>               | Variable Sword-sedge | LTG       | yes             | 2012            | 2012               | yes                  |
|                     |     |        | 501917   | <i>Lepidosperma sieberi</i>                                  | Sandhill Sword-sedge | MTG       | yes             | 1997            | 2012               | yes                  |
|                     |     |        | 503884   | <i>Leptinella reptans</i> s.s.                               | Creeping Cotula      | SH        |                 |                 |                    | yes                  |
|                     |     |        | 501956   | <i>Leptosperma continentale</i>                              | Prickly Tea-tree     | MS        |                 |                 |                    | yes                  |
|                     |     | #      | 501957   | <i>Leptosperma laevigatum</i>                                | Coast Tea-tree       | MS        | yes             | 1997            | 2012               | yes                  |
|                     |     |        | 501961   | <i>Leptosperma myrsinoides</i>                               | Heath Tea-tree       | MS        |                 |                 |                    | yes                  |
|                     |     |        | 500581   | <i>Leucophyta brownii</i>                                    | Cushion Bush         | SS        |                 | 2012            | 2012               |                      |
|                     |     |        | 501972   | <i>Leucopogon australis</i>                                  | Spike Beard-heath    | SS        |                 |                 |                    | yes                  |
|                     |     |        | 501987   | <i>Leucopogon parviflorus</i>                                | Coast Beard-heath    | MS        |                 | 1997            | 2012               | yes                  |
|                     |     |        | 501995   | <i>Leucopogon virgatus</i>                                   | Common Beard-heath   | SS        |                 |                 |                    | yes                  |
|                     |     |        | 502014   | <i>Lindsaea linearis</i>                                     | Screw Fern           | GF        |                 |                 |                    | yes                  |
|                     |     |        | 502024   | <i>Lobelia anceps</i>  | Angled Lobelia       | MH        |                 |                 |                    | yes                  |



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|                     |     |        | 502042   | <i>Lomandra filiformis</i>                             | Wattle Mat-rush         | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 502046   | <i>Lomandra longifolia</i>                             | Spiny-headed Mat-rush   | LTG       |                 | 1997            | 1997               |                      |
|                     |     |        | 504713   | <i>Lomandra longifolia</i> subsp. <i>exilis</i>        | Cluster-headed Mat-rush | LTG       |                 |                 |                    | yes                  |
|                     |     |        | 504714   | <i>Lomandra longifolia</i> subsp. <i>longifolia</i>    | Spiny-headed Mat-rush   | LTG       | yes             | 1997            | 2012               | yes                  |
|                     |     |        | 502050   | <i>Lomatia fraseri</i>                                 | Tree Lomatia            | T         |                 |                 |                    | yes                  |
|                     |     | *      | 502053   | <i>Lonicera japonica</i>                               | Japanese Honeysuckle    | SC        |                 |                 |                    | yes                  |
|                     |     |        | 503841   | <i>Luzula meridionalis</i>                             | Common Woodrush         | MTG       |                 |                 |                    | yes                  |
|                     |     | *      | 502078   | <i>Lycium ferocissimum</i>                             | African Box-thorn       | MS        |                 | 2012            | 2012               | yes                  |
|                     |     |        | 502079   | <i>Lycopodium deuterodensum</i>                        | Bushy Clubmoss          | GF        |                 |                 |                    | yes                  |
|                     |     | *      | 500223   | <i>Lysimachia arvensis</i>                             | Pimpernel               | MH        |                 |                 |                    | yes                  |
|                     |     |        | 502092   | <i>Lythrum hyssopifolia</i>                            | Small Loosestrife       | MH        |                 |                 |                    | yes                  |
|                     |     |        | 500381   | <i>Machaerina tetragona</i>                            | Square Twig-sedge       | MNG       |                 |                 |                    | yes                  |
|                     |     | *      | 502140   | <i>Medicago polymorpha</i>                             | Burr Medic              | SH        |                 |                 |                    | yes                  |
|                     | en  | #      | 502145   | <i>Melaleuca armillaris</i> subsp. <i>armillaris</i>   | Giant Honey-myrtle      | MS        |                 |                 |                    | yes                  |
|                     |     | #      | 502147   | <i>Melaleuca ericifolia</i>                            | Swamp Paperbark         | MS        | yes             | 1997            | 1997               | yes                  |
|                     |     | *      | 505854   | <i>Melaleuca hypericifolia</i>                         | Hillock Bush            | T         |                 |                 |                    | yes                  |
|                     |     |        | 502153   | <i>Melaleuca squarrosa</i>                             | Scented Paperbark       | MS        | yes             | 1997            | 1997               | yes                  |
|                     |     |        | 502179   | <i>Microlaena stipoides</i> var. <i>stipoides</i>      | Weeping Grass           | MNG       | yes             | 1997            | 1997               | yes                  |
|                     |     |        | 502183   | <i>Microsorium pustulatum</i> subsp. <i>pustulatum</i> | Kangaroo Fern           | E         |                 |                 |                    | yes                  |
|                     |     |        | 502189   | <i>Microtis unifolia</i>                               | Common Onion-orchid     | LH        |                 |                 |                    | yes                  |
|                     |     |        | 504735   | <i>Mitrasacme pilosa</i> var. <i>pilosa</i>            | Hairy Mitrewort         | SH        |                 |                 |                    | yes                  |
|                     | en  |        | 503859   | <i>Monotoca glauca</i>                                 | Currant-wood            | MS        |                 |                 |                    | yes                  |
|                     |     |        | 502220   | <i>Monotoca scoparia</i>                               | Prickly Broom-heath     | MS        |                 |                 |                    | yes                  |
|                     |     |        | 502225   | <i>Muehlenbeckia adpressa</i>                          | Climbing Lignum         | SC        |                 |                 |                    | yes                  |
|                     |     | #      | 502239   | <i>Myoporum insulare</i>                               | Common Boobialla        | T         | yes             | 2012            | 2012               | yes                  |
|                     |     | *      | 505282   | <i>Myosotis arvensis</i>                               | Field Forget-me-not     | MH        |                 |                 |                    | yes                  |
|                     |     |        | 502916   | <i>Myrsine howittiana</i>                              | Mutton-wood             | T         |                 |                 |                    | yes                  |
|                     |     |        | 502299   | <i>Olearia argophylla</i>                              | Musk Daisy-bush         | T         |                 |                 |                    | yes                  |
|                     |     |        | 502312   | <i>Olearia lirata</i>                                  | Snowy Daisy-bush        | MS        | yes             | 1997            | 1997               | yes                  |

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|                     |     |        | 502316   | <i>Olearia myrsinoides</i>                              | Silky Daisy-bush     | SS        |                 |                 |                    | yes                  |
|                     |     |        | 502319   | <i>Olearia phlogopappa</i>                              | Dusty Daisy-bush     | MS        | yes             | 2012            | 2012               |                      |
|                     |     |        | 903618   | <i>Olearia phlogopappa</i> subsp. <i>insularis</i>      | Dusty Daisy-bush     | SS        |                 |                 |                    | yes                  |
|                     |     |        | 504785   | <i>Olearia ramulosa</i> var. <i>ramulosa</i>            | Twiggy Daisy-bush    | SS        |                 |                 |                    | yes                  |
|                     |     |        | 502344   | <i>Opercularia varia</i>                                | Variable Stinkweed   | SH        | yes             | 1997            | 1997               |                      |
|                     |     |        | 502381   | <i>Oxalis exilis</i>                                    | Shade Wood-sorrel    | SH        |                 |                 |                    | yes                  |
|                     |     | *      | 502387   | <i>Oxalis pes-caprae</i>                                | Soursob              | MH        |                 |                 |                    | yes                  |
|                     |     |        | 501616   | <i>Ozothamnus ferrugineus</i>                           | Tree Everlasting     | MS        | yes             | 2012            | 2012               | yes                  |
|                     |     |        | 501622   | <i>Ozothamnus turbinatus</i>                            | Coast Everlasting    | MS        |                 | 2012            | 2012               |                      |
|                     |     |        | 502399   | <i>Pandorea pandorana</i> subsp. <i>pandorana</i>       | Wonga Vine           | SC        |                 |                 |                    | yes                  |
|                     |     |        | 502399   | <i>Pandorea pandorea</i>                                | Wonga Vine           | SC        | yes             | 1997            | 1997               |                      |
|                     |     | *      | 502423   | <i>Parietaria judaica</i>                               | Wall Pellitory       | LH        |                 |                 |                    | yes                  |
|                     |     |        | 502426   | <i>Parsonia brownii</i>                                 | Twining Silkpod      | SC        |                 |                 |                    | yes                  |
|                     |     | *      | 505286   | <i>Passiflora edulis</i>                                | Black Passion-fruit  | SC        |                 |                 |                    | yes                  |
|                     |     |        | 502437   | <i>Patersonia occidentalis</i> var. <i>occidentalis</i> | Long Purple-flag     | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 502442   | <i>Pelargonium australe</i>                             | Austral Stork's-bill | LH        |                 |                 |                    | yes                  |
|                     |     |        | 502449   | <i>Pellaea falcata</i> s.l.                             | Sickle Fern          | GF        |                 |                 |                    | yes                  |
|                     |     |        | 502463   | <i>Persoonia juniperina</i>                             | Prickly Geebung      | MS        |                 |                 |                    | yes                  |
|                     |     |        | 502497   | <i>Phragmites australis</i>                             | Common Reed          | LNG       | yes             | 1997            | 1997               | yes                  |
|                     |     |        | 502209   | <i>Phyllangium divergens</i>                            | Wiry Mitrewort       | SH        |                 |                 |                    | yes                  |
|                     |     | *      | 502508   | <i>Physalis peruviana</i>                               | Cape Gooseberry      | SS        |                 |                 |                    | yes                  |
|                     |     |        | 502523   | <i>Pimelea humilis</i>                                  | Common Rice-flower   | SS        |                 |                 |                    | yes                  |
|                     |     | *      | 502539   | <i>Pinus radiata</i>                                    | Radiata Pine         | T         |                 |                 |                    | yes                  |
|                     |     |        | 502540   | <i>Pittosporum bicolor</i>                              | Banyalla             | T         |                 |                 |                    | yes                  |
|                     |     | #      | 502543   | <i>Pittosporum undulatum</i>                            | Sweet Pittosporum    | T         |                 | 1997            | 1997               | yes                  |
|                     |     | *      | 504821   | <i>Plantago coronopus</i> subsp. <i>coronopus</i>       | Buck's-horn Plantain | MH        |                 |                 |                    | yes                  |
|                     |     |        | 502555   | <i>Plantago debilis</i>                                 | Shade Plantain       | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 502561   | <i>Plantago lanceolata</i>                              | Ribwort              | LH        |                 |                 |                    | yes                  |
|                     |     |        | 508901   | <i>Plantago</i> spp.                                    | Plantain             | H         | yes             | 1997            | 1997               |                      |



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|                     |     |        | 528671   | <i>Platylobium parviflorum</i>                        | Narrow-leaf Flat-pea     | SS        |                 |                 |                    | yes                  |
|                     |     | *      | 504194   | <i>Plectranthus ciliatus</i>                          | African Spur-flower      | LH        |                 |                 |                    | yes                  |
|                     |     | *      | 502580   | <i>Poa annua s.l.</i>                                 | Annual Meadow-grass      | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 504694   | <i>Poa labillardierei</i> var. <i>labillardierei</i>  | Common Tussock-grass     | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 504833   | <i>Poa poiformis</i> var. <i>poiformis</i>            | Coast Tussock-grass      | MTG       | yes             | 2012            | 2012               | yes                  |
|                     |     |        | 508909   | <i>Poa spp.</i>                                       | Tussock Grass            | TG        | yes             | 1997            | 1997               |                      |
|                     |     |        | 502610   | <i>Poa tenera</i>                                     | Slender Tussock-grass    | MNG       |                 | 1997            | 1997               | yes                  |
|                     |     |        | 502643   | <i>Polyscias sambucifolia</i>                         | Elderberry Panax         | MS        |                 |                 |                    | yes                  |
|                     |     |        | 502645   | <i>Polystichum proliferum</i>                         | Mother Shield-fern       | GF        | yes             | 1997            | 1997               | yes                  |
|                     |     |        | 502650   | <i>Pomaderris aspera</i>                              | Hazel Pomaderris         | T         |                 |                 |                    | yes                  |
|                     |     |        | 502665   | <i>Pomaderris oraria</i> subsp. <i>oraria</i>         | Bassian Pomaderris       | MS        |                 |                 |                    | yes                  |
|                     |     |        | 502683   | <i>Poranthera microphylla s.l.</i>                    | Small Poranthera         | MH        |                 |                 |                    | yes                  |
|                     |     |        | 504845   | <i>Prostanthera lasianthos</i> var. <i>lasianthos</i> | Victorian Christmas-bush | MS        |                 |                 |                    | yes                  |
|                     |     | *      | 502757   | <i>Prunella vulgaris</i>                              | Self-heal                | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 502758   | <i>Prunus cerasifera</i>                              | Cherry Plum              | MS        |                 |                 |                    | yes                  |
|                     |     |        | 502777   | <i>Pteridium esculentum</i> subsp. <i>esculentum</i>  | Austral Bracken          | GF        | yes             | 1997            | 1997               | yes                  |
|                     |     |        | 502779   | <i>Pteris tremula</i>                                 | Tender Brake             | GF        |                 |                 |                    | yes                  |
|                     |     |        | 502810   | <i>Pterostylis pedunculata</i>                        | Maroonhood               | MH        |                 |                 |                    | yes                  |
|                     |     |        | 502844   | <i>Pultenaea daphnoides</i>                           | Large-leaf Bush-pea      | MS        | yes             | 1997            | 2012               | yes                  |
|                     |     |        | 502894   | <i>Ranunculus lappaceus</i>                           | Australian Buttercup     | MH        |                 |                 |                    | yes                  |
|                     |     |        | 502912   | <i>Ranunculus sessiliflorus</i>                       | Annual Buttercup         | MH        |                 |                 |                    | yes                  |
|                     |     |        | 502927   | <i>Rhagodia candolleana</i> subsp. <i>candolleana</i> | Seaberry Saltbush        | MS        | yes             | 2012            | 2012               | yes                  |
|                     |     | *      | 502959   | <i>Rubus anglocandicans</i>                           | Common Blackberry        | SC        |                 |                 |                    | yes                  |
|                     |     | *      | 502952   | <i>Rubus fruticosus</i> spp. agg.                     | Blackberry               | SC        | yes             | 1997            | 1997               |                      |
|                     |     |        | 502956   | <i>Rubus parvifolius</i>                              | Small-leaf Bramble       | SC        | yes             | 1997            | 1997               | yes                  |
|                     |     |        | 500961   | <i>Rytidosperma caespitosum</i>                       | Common Wallaby-grass     | MTG       |                 | 2012            | 2012               |                      |
|                     |     |        | 500969   | <i>Rytidosperma longifolium</i>                       | Long-leaf Wallaby-grass  | MTG       | yes             | 2012            | 2012               |                      |
|                     |     | *      | 502991   | <i>Salix X fragilis</i>                               | Crack Willow             | T         |                 |                 |                    | yes                  |
|                     |     |        | 502999   | <i>Sambucus gaudichaudiana</i>                        | White Elderberry         | MH        |                 |                 |                    | yes                  |

| Conservation Status |     | Origin | Taxon ID | Scientific Name  | Common Name                          | Life Form | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|--------|----------|--|--------------------------------------|-----------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG |        |          |  |                                      |           | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |     |        | 503001   | <i>Samolus repens</i>                                  | Creeping Brookweed                   | MH        |                 |                 |                    | yes                  |
|                     |     |        | 503039   | <i>Schoenus apogon</i>                                 | Common Bog-sedge                     | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 503048   | <i>Schoenus maschalinus</i>                            | Leafy Bog-sedge                      | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 503102   | <i>Senecio biserratus</i>                              | Jagged Fireweed                      | MH        |                 |                 |                    | yes                  |
|                     |     |        | 503107   | <i>Senecio glomeratus</i>                              | Annual Fireweed                      | LH        |                 |                 |                    | yes                  |
|                     |     |        | 503111   | <i>Senecio hispidulus s.l.</i>                         | Rough Fireweed                       | LH        |                 |                 |                    | yes                  |
|                     |     | *      | 503113   | <i>Senecio jacobaea</i>                                | Ragwort                              | LH        |                 |                 |                    | yes                  |
|                     |     |        | 507541   | <i>Senecio linearifolius</i> var. <i>denticulatus</i>  | Fireweed Groundsel (eastern variant) | LH        |                 |                 |                    | yes                  |
|                     |     |        | 503119   | <i>Senecio minimus</i>                                 | Shrubby Fireweed                     | LH        |                 |                 |                    | yes                  |
|                     |     |        | 503120   | <i>Senecio odoratus</i>                                | Scented Groundsel                    | LH        | yes             | 2012            | 2012               | yes                  |
|                     |     |        | 503114   | <i>Senecio pinnatifolius</i>                           | Variable Groundsel                   | LH        | yes             | 2012            | 2012               |                      |
|                     |     |        | 509058   | <i>Senecio spp.</i>                                    | Groundsel                            | H         | yes             | 1997            | 2012               |                      |
|                     |     |        | 503149   | <i>Sigesbeckia orientalis</i> subsp. <i>orientalis</i> | Indian Weed                          | LH        |                 |                 |                    | yes                  |
|                     |     |        | 503169   | <i>Solanum aviculare</i>                               | Kangaroo Apple                       | MS        |                 |                 |                    | yes                  |
|                     |     |        | 503196   | <i>Solenogyne gunnii</i>                               | Hairy Solenogyne                     | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 503203   | <i>Sonchus asper s.l.</i>                              | Rough Sow-thistle                    | LH        |                 |                 |                    | yes                  |
|                     |     | *      | 503204   | <i>Sonchus oleraceus</i>                               | Common Sow-thistle                   | LH        |                 |                 |                    | yes                  |
|                     |     |        | 503222   | <i>Spinifex sericeus</i>                               | Hairy Spinifex                       | MNG       |                 |                 |                    | yes                  |
|                     |     | *      | 503226   | <i>Sporobolus africanus</i>                            | Rat-tail Grass                       | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 503235   | <i>Spyridium parvifolium</i>                           | Dusty Miller                         | MS        |                 | 1997            | 1997               |                      |
|                     |     |        | 503244   | <i>Stackhousia monogyna s.l.</i>                       | Creamy Stackhousia                   | MH        |                 | 1997            | 1997               | yes                  |
|                     |     |        | 503250   | <i>Stellaria flaccida</i>                              | Forest Starwort                      | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 503260   | <i>Stenotaphrum secundatum</i>                         | Buffalo Grass                        | MNG       |                 |                 |                    | yes                  |
|                     |     |        | 528632   | <i>Stylidium armeria</i> subsp. <i>armeria</i>         | Common Triggerplant                  | MTG       |                 |                 |                    | yes                  |
|                     |     |        | 500304   | <i>Styphelia humifusa</i>                              | Cranberry Heath                      | PS        |                 |                 |                    | yes                  |
|                     |     | #      | 500115   | <i>Syzygium smithii</i>                                | Lilly Pilly                          | T         |                 |                 |                    | yes                  |
|                     |     |        | 503343   | <i>Tetragonia implexicoma</i>                          | Bower Spinach                        | SC        | yes             | 2012            | 2012               | yes                  |
|                     |     |        | 503344   | <i>Tetragonia tetragonioides</i>                       | New Zealand Spinach                  | SC        |                 |                 |                    | yes                  |
|                     |     |        | 503348   | <i>Tetrarrhena juncea</i>                              | Forest Wire-grass                    | LNG       | yes             | 1997            | 1997               | yes                  |



| Conservation Status |     | Origin | Taxon ID | Scientific Name                              | Common Name            | Life Form | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|--------|----------|--|------------------------|-----------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG |        |          |  |                        |           | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |     |        | 503351   | <i>Tetradlea ciliata</i>                     | Pink-bells             | SS        |                 |                 |                    | yes                  |
|                     |     |        | 503368   | <i>Thelymitra flexuosa</i>                   | Twisted Sun-orchid     | MH        |                 |                 |                    | yes                  |
|                     |     |        | 503370   | <i>Thelymitra holmesii s.l.</i>              | Blue-star Sun-orchid   | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 500142   | <i>Thinopyrum junceiforme</i>                | Sea Wheat-grass        | MNG       |                 |                 |                    | yes                  |
|                     |     |        | 503393   | <i>Threlkeldia diffusa</i>                   | Coast Bonefruit        | SH        |                 | 2012            | 2012               | yes                  |
|                     |     |        | 503406   | <i>Todea barbara</i>                         | Austral King-fern      | TF        |                 |                 |                    | yes                  |
|                     |     | *      | 503416   | <i>Tradescantia fluminensis</i>              | Wandering Jew          | SC        |                 |                 |                    | yes                  |
|                     |     | *      | 503435   | <i>Trifolium repens var. repens</i>          | White Clover           | SH        |                 |                 |                    | yes                  |
|                     |     |        | 503449   | <i>Triglochin striata</i>                    | Streaked Arrowgrass    | MNG       |                 |                 |                    | yes                  |
|                     |     |        | 503476   | <i>Urtica incisa</i>                         | Scrub Nettle           | LH        |                 |                 |                    | yes                  |
|                     |     | *      | 503491   | <i>Vellereophyton dealbatum</i>              | White Cudweed          | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 503502   | <i>Veronica arvensis</i>                     | Wall Speedwell         | MH        |                 |                 |                    | yes                  |
|                     |     |        | 503512   | <i>Veronica plebeia</i>                      | Trailing Speedwell     | MH        |                 | 2020            | 2020               | yes                  |
|                     |     | *      | 503524   | <i>Vinca major</i>                           | Blue Periwinkle        | SC        |                 |                 |                    | yes                  |
|                     |     |        | 505058   | <i>Viola hederacea sensu Entwisle (1996)</i> | Ivy-leaf Violet        | MH        |                 |                 |                    | yes                  |
|                     |     |        | 503528   | <i>Viola hederacea sensu Willis (1972)</i>   | Ivy-leaf Violet        | MH        | yes             | 1997            | 1997               |                      |
|                     |     |        | 503555   | <i>Wahlenbergia gracilentia s.l.</i>         | Annual Bluebell        | MH        |                 |                 |                    | yes                  |
|                     |     | *      | 509245   | <i>Washingtonia spp.</i>                     | Fan Palm               | P         |                 |                 |                    | yes                  |
|                     | vu  |        | 503583   | <i>Wurmbea uniflora</i>                      | One-flower Early Nancy | MH        |                 |                 |                    | yes                  |
|                     |     |        | 503587   | <i>Xanthorrhoea australis</i>                | Austral Grass-tree     | LTG       |                 |                 |                    | yes                  |
|                     |     |        | 503588   | <i>Xanthorrhoea minor subsp. lutea</i>       | Small Grass-tree       | LTG       |                 |                 |                    | yes                  |
|                     |     |        | 504561   | <i>Xanthosia dissecta s.s.</i>               | Native Parsley         | PS        |                 |                 |                    | yes                  |
|                     |     |        | 503592   | <i>Xanthosia pilosa</i>                      | Woolly Xanthosia       | SS        |                 |                 |                    | yes                  |
|                     |     | *      | 509266   | <i>Yucca spp.</i>                            | Yucca                  | T         |                 |                 |                    | yes                  |
|                     |     | *      | 503599   | <i>Zantedeschia aethiopica</i>               | White Arum-lily        | LH        |                 |                 |                    | yes                  |
|                     |     |        | 503601   | <i>Zieria arborescens subsp. arborescens</i> | Stinkwood              | T         |                 |                 |                    | yes                  |

Conservation status is as per the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999) and Flora and Fauna Guarantee Act 1988 (FFG Act 1988) - CR: Critically Endangered; EN: Endangered; and VU: Vulnerable. Acronyms shown in upper case reference the conservation status on the EPBC Act 1999; those in lower case reference the FFG Act 1988.

Taxon ID – as per the Department of Environment, Land Water and Planning Victorian Biodiversity Atlas (DELWP, 2022c)

Origin - an asterisk (\*) denotes species of exotic origin, and a hash (#) denotes those that are native, but where some stands may be alien.

Life Form – T: Understorey Tree or Large Shrub; MS: Medium Shrub; SS: Small Shrub; PS: Prostrate Shrub; SC: Scrambler or Climber; LNG: Large Non-Tufted Graminoid; LTG: Large Tufted Graminoid; MTG: Medium to Small Tufted Graminoid; MNG: Medium to Tiny Non-Tufted Graminoid; LH: Large Herb; MH: Medium Herb; SH: Small or Prostrate Herb; GF: Ground Fern; TF: Tree Fern; E: Epiphyte.

#### Source of Database Records:

Department of Environment, Land Water and Planning (2023d) Victorian Biodiversity Atlas flora records (restricted) - VBA\_FLORA\_RESTRICTED [ESRI Geodatabase] Data Publication Date: 28th May 2023.

Department of Environment, Land Water and Planning (2023e) Victorian Biodiversity Atlas flora records (unrestricted) for sites with high spatial accuracy - VBA\_FLORA25 [ESRI Geodatabase] Data Publication Date: 28th May 2023.

Department of Environment, Land Water and Planning (2023f) Victorian Biodiversity Atlas flora records (unrestricted) for sites with moderate to low spatial accuracy - VBA\_FLORA100 [ESRI Geodatabase] Data Publication Date: 28th May 2023.



APPENDIX 3 Fauna recorded at Walkerville Foreshore Reserve, October – December 2023

Table 22 Fauna species recorded at Walkerville Foreshore Reserve, October – December 2023

| Conservation Status |     |        | Origin | Taxon ID | Common Name                  | Scientific Name                         | Taxon Type                 |
|---------------------|-----|--------|--------|----------|------------------------------|---|----------------------------|
| EPBC                | FFG | Treaty |        |          |                              |   |                            |
|                     |     |        |        | 11028    | Agile Antechinus             | <i>Antechinus agilis</i>                | Mammals                    |
|                     |     |        |        | 10104    | Australasian Gannet          | <i>Morus serrator</i>                   | Marine birds               |
|                     |     |        |        | 11542    | Australian Fur Seal          | <i>Arctocephalus pusillus doriferus</i> | Mammals                    |
|                     |     |        |        | 10705    | Australian Magpie            | <i>Gymnorhina tibicen</i>               | Passerine birds            |
|                     |     |        |        | 10647    | Australian Pipit             | <i>Anthus australis</i>                 | Passerine birds            |
|                     |     |        |        | 10930    | Australian Raven             | <i>Corvus coronoides</i>                | Passerine birds            |
|                     |     |        |        | 10207    | Australian Shelduck          | <i>Tadorna tadornoides</i>              | Non-passerine birds        |
|                     |     |        |        | 10179    | Australian White Ibis        | <i>Threskiornis molucca</i>             | Non-passerine birds        |
|                     |     |        |        | 10202    | Australian Wood Duck         | <i>Chenonetta jubata</i>                | Non-passerine birds        |
|                     |     |        |        | 11165    | Bare-nosed Wombat            | <i>Vombatus ursinus</i>                 | Mammals                    |
|                     |     |        |        | 10779    | Bassian Thrush               | <i>Zoothera lunulata</i>                | Passerine birds            |
|                     |     |        |        | 10650    | Beautiful Firetail           | <i>Stagonopleura bella</i>              | Passerine birds            |
|                     |     |        |        | 10424    | Black-faced Cuckoo-shrike    | <i>Coracina novaehollandiae</i>         | Passerine birds            |
|                     |     |        |        | 10232    | Black-shouldered Kite        | <i>Elanus axillaris</i>                 | Non-passerine birds        |
|                     |     |        |        | 11242    | Black-tailed Wallaby         | <i>Wallabia bicolor</i>                 | Mammals                    |
|                     |     |        |        | 12578    | Blotched Blue-tongued Lizard | <i>Tiliqua nigrolutea</i>               | Reptiles                   |
| VU                  |     |        |        | 10306    | Blue-winged Parrot           | <i>Neophema chrysostoma</i>             | Non-passerine birds        |
|                     |     |        |        | 10221    | Brown Goshawk                | <i>Accipiter fasciatus</i>              | Non-passerine birds        |
|                     |     |        |        | 10475    | Brown Thornbill              | <i>Acanthiza pusilla</i>                | Passerine birds            |
|                     |     |        |        | 10583    | Brown-headed Honeyeater      | <i>Melithreptus brevirostris</i>        | Passerine birds            |
|                     |     |        |        | 10035    | Brush Bronzewing             | <i>Phaps elegans</i>                    | Non-passerine birds        |
|                     |     |        |        | 50162    | Burrowing Crayfish           | <i>Engaeus spp.</i>                     | Mussels, decapod crustacea |
|                     |     |        |        | 11395    | Bush Rat                     | <i>Rattus fuscipes</i>                  | Mammals                    |
|                     |     |        |        | 10210    | Chestnut Teal                | <i>Anas castanea</i>                    | Non-passerine birds        |
|                     |     |        |        | 4694     | Climbing Galaxias            | <i>Galaxias brevipinnis</i>             | Fish                       |
|                     |     |        | *      | 10991    | Common Blackbird             | <i>Turdus merula</i>                    | Passerine birds            |
|                     |     |        |        | 10034    | Common Bronzewing            | <i>Phaps chalcoptera</i>                | Non-passerine birds        |

| Conservation Status |     |         | Origin | Taxon ID | Common Name                | Scientific Name                     | Taxon Type          |
|---------------------|-----|---------|--------|----------|----------------------------|-------------------------------------|---------------------|
| EPBC                | FFG | Treaty  |        |          |                            |                                     |                     |
|                     |     |         |        | 11113    | Common Brush-tailed Possum | <i>Trichosurus vulpecula</i>        | Mammals             |
|                     |     |         |        | 13134    | Common Froglet             | <i>Crinia signifera</i>             | Amphibians          |
|                     | vu  | B C J R |        | 10157    | Common Sandpiper           | <i>Actitis hypoleucos</i>           | Waders              |
|                     |     |         | *      | 10999    | Common Starling            | <i>Sturnus vulgaris</i>             | Passerine birds     |
|                     |     |         |        | 10630    | Crescent Honeyeater        | <i>Phylidonyris pyrrhopterus</i>    | Passerine birds     |
|                     |     |         |        | 10115    | Crested Tern               | <i>Thalasseus bergii</i>            | Waders              |
|                     |     |         |        | 10282    | Crimson Rosella            | <i>Platycercus elegans</i>          | Non-passerine birds |
|                     |     |         |        | 10547    | Dusky Woodswallow          | <i>Artamus cyanopterus</i>          | Passerine birds     |
|                     |     |         |        | 11265    | Eastern Grey Kangaroo      | <i>Macropus giganteus</i>           | Mammals             |
|                     |     |         |        | 10288    | Eastern Rosella            | <i>Platycercus eximius</i>          | Non-passerine birds |
|                     |     |         |        | 10591    | Eastern Spinebill          | <i>Acanthorhynchus tenuirostris</i> | Passerine birds     |
|                     |     |         |        | 10421    | Eastern Whipbird           | <i>Psophodes olivaceus</i>          | Passerine birds     |
|                     |     |         |        | 10392    | Eastern Yellow Robin       | <i>Eopsaltria australis</i>         | Passerine birds     |
|                     |     |         | *      | 11523    | Fallow Deer                | <i>Dama dama</i>                    | Mammals             |
|                     |     |         |        | 10338    | Fan-tailed Cuckoo          | <i>Cacomantis flabelliformis</i>    | Non-passerine birds |
|                     |     |         |        | 10273    | Galah                      | <i>Eolophus roseicapilla</i>        | Non-passerine birds |
| EN                  |     |         |        | 10268    | Gang-gang Cockatoo         | <i>Callocephalon fimbriatum</i>     | Non-passerine birds |
|                     |     |         |        | 12451    | Garden Skink               | <i>Lampropholis guichenoti</i>      | Reptiles            |
|                     |     |         |        | 10398    | Golden Whistler            | <i>Pachycephala pectoralis</i>      | Passerine birds     |
|                     |     |         |        | 10702    | Grey Butcherbird           | <i>Cracticus torquatus</i>          | Passerine birds     |
|                     |     |         |        | 10697    | Grey Currawong             | <i>Strepera versicolor</i>          | Passerine birds     |
|                     |     |         |        | 10361    | Grey Fantail               | <i>Rhipidura albiscapa</i>          | Passerine birds     |
|                     |     |         |        | 10408    | Grey Shrike-thrush         | <i>Colluricincla harmonica</i>      | Passerine birds     |
|                     | en  |         |        | 12283    | Lace Monitor               | <i>Varanus varius</i>               | Reptiles            |
|                     |     |         |        | 10322    | Laughing Kookaburra        | <i>Dacelo novaeguineae</i>          | Non-passerine birds |
|                     |     |         |        | 10637    | Little Wattlebird          | <i>Anthochaera chrysoptera</i>      | Passerine birds     |
|                     |     |         |        | 12973    | Lowland Copperhead         | <i>Austrelaps superbis</i>          | Reptiles            |
|                     |     |         |        | 10415    | Magpie-lark                | <i>Grallina cyanoleuca</i>          | Passerine birds     |



| Conservation Status |     |        | Origin | Taxon ID | Common Name               | Scientific Name                        | Taxon Type          |
|---------------------|-----|--------|--------|----------|---------------------------|--|---------------------|
| EPBC                | FFG | Treaty |        |          |                           |  |                     |
|                     |     |        |        | 11033    | Mainland Dusky Antechinus | <i>Antechinus mimites</i>              | Mammals             |
|                     |     |        |        | 10133    | Masked Lapwing            | <i>Vanellus miles</i>                  | Waders              |
|                     |     |        |        | 12462    | Metallic Skink            | <i>Carinascincus metallicus</i>        | Reptiles            |
|                     |     |        |        | 6003     | Morepork                  | <i>Ninox novaeseelandiae</i>           | Non-passerine birds |
|                     |     |        |        | 10240    | Nankeen Kestrel           | <i>Falco cenchroides</i>               | Non-passerine birds |
|                     |     |        |        | 10631    | New Holland Honeyeater    | <i>Phylidonyris novaehollandiae</i>    | Passerine birds     |
|                     |     |        |        | 10405    | Olive Whistler            | <i>Pachycephala olivacea</i>           | Passerine birds     |
|                     |     |        |        | 10208    | Pacific Black Duck        | <i>Anas superciliosa</i>               | Non-passerine birds |
|                     |     |        |        | 60126    | Pacific Gull              | <i>Larus pacificus</i>                 | Waders              |
|                     |     |        |        | 10337    | Pallid Cuckoo             | <i>Cacomantis pallidus</i>             | Non-passerine birds |
|                     | vu  |        |        | 10248    | Powerful Owl              | <i>Ninox strenua</i>                   | Non-passerine birds |
|                     |     |        | *      | 528552   | Red Fox                   | <i>Vulpes vulpes</i>                   | Mammals             |
|                     |     |        |        | 10638    | Red Wattlebird            | <i>Anthochaera carunculata</i>         | Passerine birds     |
|                     |     |        |        | 10662    | Red-browed Finch          | <i>Neochmia temporalis</i>             | Passerine birds     |
|                     |     | B      |        | 10362    | Rufous Fantail            | <i>Rhipidura rufifrons</i>             | Passerine birds     |
|                     |     |        |        | 10401    | Rufous Whistler           | <i>Pachycephala rufiventris</i>        | Passerine birds     |
|                     |     |        |        | 10326    | Sacred Kingfisher         | <i>Todiramphus sanctus</i>             | Non-passerine birds |
|                     |     |        |        | 11003    | Short-beaked Echidna      | <i>Tachyglossus aculeatus</i>          | Mammals             |
|                     |     |        |        | 10125    | Silver Gull               | <i>Chroicocephalus novaehollandiae</i> | Waders              |
|                     |     |        |        | 10574    | Silvereye                 | <i>Zosterops lateralis</i>             | Passerine birds     |
|                     |     |        |        | 10131    | Sooty Oystercatcher       | <i>Haematopus fuliginosus</i>          | Waders              |
|                     |     |        |        | 10242    | Southern Boobook          | <i>Ninox boobook</i>                   | Non-passerine birds |
|                     |     |        |        | 62956    | Southern Water Skink      | <i>Eulamprus tympanum tympanum</i>     | Reptiles            |
|                     |     |        |        | 10565    | Spotted Pardalote         | <i>Pardalotus punctatus</i>            | Passerine birds     |
|                     |     |        |        | 10269    | Sulphur-crested Cockatoo  | <i>Cacatua galerita</i>                | Non-passerine birds |
|                     |     |        |        | 10529    | Superb Fairy-wren         | <i>Malurus cyaneus</i>                 | Passerine birds     |
|                     |     |        |        | 10350    | Superb Lyrebird           | <i>Menura novaehollandiae</i>          | Passerine birds     |
|                     |     |        |        | 12681    | Tiger Snake               | <i>Notechis scutatus</i>               | Reptiles            |
|                     |     |        |        | 13033    | Victorian Smooth Froglet  | <i>Geocrinia victoriana</i>            | Amphibians          |

| Conservation Status |     |        | Origin | Taxon ID | Common Name                  | Scientific Name                 | Taxon Type          |
|---------------------|-----|--------|--------|----------|------------------------------|---------------------------------|---------------------|
| EPBC                | FFG | Treaty |        |          |                              |                                 |                     |
|                     |     |        |        | 12452    | Weasel Skink                 | <i>Saproscincus mustelinus</i>  | Reptiles            |
|                     |     |        |        | 10224    | Wedge-tailed Eagle           | <i>Aquila audax</i>             | Non-passerine birds |
|                     |     |        |        | 10357    | Welcome Swallow              | <i>Hirundo neoxena</i>          | Passerine birds     |
|                     | en  | C      |        | 10226    | White-bellied Sea-Eagle      | <i>Haliaeetus leucogaster</i>   | Non-passerine birds |
|                     |     |        |        | 10488    | White-browed Scrubwren       | <i>Sericornis frontalis</i>     | Passerine birds     |
|                     |     |        |        | 10188    | White-faced Heron            | <i>Egretta novaehollandiae</i>  | Non-passerine birds |
|                     | vu  |        |        | 11069    | White-footed Dunnart         | <i>Sminthopsis leucopus</i>     | Mammals             |
|                     |     |        |        | 10189    | White-necked Heron           | <i>Ardea pacifica</i>           | Non-passerine birds |
| VU                  | vu  | C J R  |        | 10334    | White-throated Needletail    | <i>Hirundapus caudacutus</i>    | Non-passerine birds |
|                     |     |        |        | 10558    | White-throated Treecreeper   | <i>Cormobates leucophaea</i>    | Passerine birds     |
|                     |     |        |        | 10364    | Willie Wagtail               | <i>Rhipidura leucophrys</i>     | Passerine birds     |
|                     |     |        |        | 10267    | Yellow-tailed Black-Cockatoo | <i>Calyptorhynchus funereus</i> | Non-passerine birds |

Conservation status is as per the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999) and Flora and Fauna Guarantee Act 1988 (FFG Act 1988) - CR: Critically Endangered; EN: Endangered; and VU: Vulnerable. Acronyms shown in upper case reference the conservation status on the EPBC Act 1999; those in lower case reference the FFG Act 1988.

Treaty – B: Bonn Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979 (BonnA2H); C: China-Australia Migratory Bird Agreement (CAMBA); J: Japan-Australia Migratory Bird Agreement (JAMBA); R: Republic of Korea Australia Migratory Bird Agreement (ROKAMBA)

Taxon ID – as per the Department of Environment, Land Water and Planning Victorian Biodiversity Atlas (DELWP, 2022c)

Origin - an asterisk (\*) denotes species that are introduced.



**APPENDIX 4 Fauna species recorded within 100 metres of Walkerville Foreshore Reserve (collated from targeted survey and database records)**

**Table 23 Fauna species recorded within 100 metres of Walkerville Foreshore Reserve (collated from target survey and database records)**

The following inventory comprises of fauna recorded at the site and within 100 metres of the site boundary. Records for current study were yielded from incidental observations made during a targeted vegetation survey of Walkerville Foreshore Reserve that was completed from October - December 2023. The search parameter for database records was return all records that occur within the reserve boundary, and within a lineal distance of 100 metres of the reserve boundary. Note: references to the earliest and most recent database records pertain to those taxa documented within 100 metres of the reserve boundary; not within the reserve itself. The currency of database records within the reserve boundary is provided in the accompanying database. Note also, as the inventory comprises of both current and historic records, it is probable that some of the recorded taxa no utilise / frequent the site.

| Conservation Status |     |        | Origin | Taxon ID | Common Name                  | Scientific Name                         | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|--------|--------|----------|------------------------------|---|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG | Treaty |        |          |                              |   | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |     |        |        | 11028    | Agile Antechinus             | <i>Antechinus agilis</i>                |                 |                 |                    | yes                  |
|                     |     |        |        | 10104    | Australasian Gannet          | <i>Morus serrator</i>                   | yes             | 2000            | 2019               | yes                  |
|                     |     |        |        | 10061    | Australasian Grebe           | <i>Tachybaptus novaehollandiae</i>      | yes             | 2000            | 2000               |                      |
|                     |     |        |        | 11542    | Australian Fur Seal          | <i>Arctocephalus pusillus doriferus</i> |                 | 2014            | 2020               | yes                  |
|                     |     |        |        | 10705    | Australian Magpie            | <i>Gymnorhina tibicen</i>               | yes             | 2004            | 2010               | yes                  |
|                     |     |        |        | 10647    | Australian Pipit             | <i>Anthus australis</i>                 |                 |                 |                    | yes                  |
|                     |     |        |        | 10930    | Australian Raven             | <i>Corvus coronoides</i>                | yes             | 2000            | 2010               | yes                  |
|                     |     |        |        | 10207    | Australian Shelduck          | <i>Tadorna tadornoides</i>              |                 |                 |                    | yes                  |
|                     |     |        |        | 10179    | Australian White Ibis        | <i>Threskiornis molucca</i>             |                 | 2009            | 2009               | yes                  |
|                     |     |        |        | 10202    | Australian Wood Duck         | <i>Chenonetta jubata</i>                | yes             | 2000            | 2000               | yes                  |
|                     |     |        |        | 11165    | Bare-nosed Wombat            | <i>Vombatus ursinus</i>                 |                 |                 |                    | yes                  |
|                     |     |        |        | 10779    | Bassian Thrush               | <i>Zoothera lunulata</i>                |                 |                 |                    | yes                  |
|                     |     |        |        | 10650    | Beautiful Firetail           | <i>Stagonopleura bella</i>              |                 |                 |                    | yes                  |
|                     |     |        |        | 10098    | Black-faced Cormorant        | <i>Phalacrocorax fuscescens</i>         | yes             | 2004            | 2021               |                      |
|                     |     |        |        | 10424    | Black-faced Cuckoo-shrike    | <i>Coracina novaehollandiae</i>         |                 |                 |                    | yes                  |
|                     |     |        |        | 10232    | Black-shouldered Kite        | <i>Elanus axillaris</i>                 |                 |                 |                    | yes                  |
|                     |     |        |        | 11242    | Black-tailed Wallaby         | <i>Wallabia bicolor</i>                 |                 | 2020            | 2020               | yes                  |
|                     |     |        |        | 12578    | Blotched Blue-tongued Lizard | <i>Tiliqua nigrolutea</i>               |                 |                 |                    | yes                  |
| VU                  |     |        |        | 10306    | Blue-winged Parrot           | <i>Neophema chrysostoma</i>             |                 |                 |                    | yes                  |
|                     |     |        |        | 10221    | Brown Goshawk                | <i>Accipiter fasciatus</i>              |                 |                 |                    | yes                  |
|                     |     |        |        | 10475    | Brown Thornbill              | <i>Acanthiza pusilla</i>                | yes             | 1991            | 2021               | yes                  |
|                     |     |        |        | 10583    | Brown-headed Honeyeater      | <i>Meliphreptus brevirostris</i>        |                 |                 |                    | yes                  |
|                     |     |        |        | 10035    | Brush Bronzewing             | <i>Phaps elegans</i>                    | yes             | 2000            | 2000               | yes                  |

| Conservation Status |     |         | Origin | Taxon ID | Common Name                | Scientific Name                     | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|---------|--------|----------|----------------------------|-------------------------------------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG | Treaty  |        |          |                            |                                     | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |     |         |        | 50162    | Burrowing Crayfish         | <i>Engaeus spp.</i>                 |                 |                 |                    | yes                  |
|                     |     |         |        | 11395    | Bush Rat                   | <i>Rattus fuscipes</i>              |                 |                 |                    | yes                  |
|                     |     |         |        | 10210    | Chestnut Teal              | <i>Anas castanea</i>                | yes             | 2000            | 2000               | yes                  |
|                     |     |         |        | 4694     | Climbing Galaxias          | <i>Galaxias brevipinnis</i>         |                 |                 |                    | yes                  |
|                     |     |         | *      | 10991    | Common Blackbird           | <i>Turdus merula</i>                | yes             | 1991            | 2019               | yes                  |
|                     |     |         |        | 10034    | Common Bronzewing          | <i>Phaps chalcoptera</i>            |                 |                 |                    | yes                  |
|                     |     |         |        | 11113    | Common Brush-tailed Possum | <i>Trichosurus vulpecula</i>        |                 |                 |                    | yes                  |
|                     |     |         |        | 13134    | Common Froglet             | <i>Crinia signifera</i>             |                 | 1991            | 2018               | yes                  |
|                     | vu  | B C J R |        | 10157    | Common Sandpiper           | <i>Actitis hypoleucos</i>           |                 |                 |                    | yes                  |
|                     |     |         | *      | 10999    | Common Starling            | <i>Sturnus vulgaris</i>             | yes             | 1999            | 2009               | yes                  |
|                     |     |         |        | 10630    | Crescent Honeyeater        | <i>Phylidonyris pyrrhopterus</i>    | yes             | 1991            | 2018               | yes                  |
|                     |     |         |        | 10115    | Crested Tern               | <i>Thalasseus bergii</i>            | yes             | 2004            | 2019               | yes                  |
|                     |     |         |        | 10282    | Crimson Rosella            | <i>Platycercus elegans</i>          | yes             | 1991            | 2021               | yes                  |
|                     |     |         |        | 10547    | Dusky Woodswallow          | <i>Artamus cyanopterus</i>          |                 |                 |                    | yes                  |
|                     |     |         |        | 11265    | Eastern Grey Kangaroo      | <i>Macropus giganteus</i>           |                 |                 |                    | yes                  |
|                     |     |         | C      | 10191    | Eastern Reef Egret         | <i>Egretta sacra</i>                | yes             | 2010            | 2010               |                      |
|                     |     |         |        | 10288    | Eastern Rosella            | <i>Platycercus eximius</i>          |                 |                 |                    | yes                  |
|                     |     |         |        | 10591    | Eastern Spinebill          | <i>Acanthorhynchus tenuirostris</i> |                 | 1991            | 2019               | yes                  |
|                     |     |         |        | 10421    | Eastern Whipbird           | <i>Psophodes olivaceus</i>          |                 | 1999            | 2018               | yes                  |
|                     |     |         |        | 10392    | Eastern Yellow Robin       | <i>Eopsaltria australis</i>         | yes             | 1991            | 2021               | yes                  |
|                     |     |         | *      | 11523    | Fallow Deer                | <i>Dama dama</i>                    |                 |                 |                    | yes                  |
|                     |     |         |        | 10338    | Fan-tailed Cuckoo          | <i>Cacomantis flabelliformis</i>    |                 |                 |                    | yes                  |
|                     |     |         |        | 10868    | Forest Raven               | <i>Corvus tasmanicus</i>            |                 | 2020            | 2020               |                      |
|                     |     |         |        | 10273    | Galah                      | <i>Eolophus roseicapilla</i>        |                 | 1999            | 2010               | yes                  |
| EN                  |     |         |        | 10268    | Gang-gang Cockatoo         | <i>Callocephalon fimbriatum</i>     |                 |                 |                    | yes                  |
|                     |     |         |        | 12451    | Garden Skink               | <i>Lampropholis guichenoti</i>      |                 |                 |                    | yes                  |
|                     |     |         |        | 10398    | Golden Whistler            | <i>Pachycephala pectoralis</i>      |                 | 1991            | 2009               | yes                  |



| Conservation Status |     |        | Origin | Taxon ID | Common Name               | Scientific Name                     | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|--------|--------|----------|---------------------------|-------------------------------------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG | Treaty |        |          |                           |                                     | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |     |        |        | 10096    | Great Cormorant           | <i>Phalacrocorax carbo</i>          | yes             | 1999            | 2021               |                      |
|                     |     |        |        | 10702    | Grey Butcherbird          | <i>Cracticus torquatus</i>          |                 |                 |                    | yes                  |
|                     |     |        |        | 10697    | Grey Currawong            | <i>Strepera versicolor</i>          |                 | 1991            | 1991               | yes                  |
|                     |     |        |        | 10361    | Grey Fantail              | <i>Rhipidura albiscapa</i>          | yes             | 1991            | 2021               | yes                  |
|                     |     |        |        | 10408    | Grey Shrike-thrush        | <i>Colluricincla harmonica</i>      | yes             | 1991            | 2018               | yes                  |
| VU                  | vu  |        |        | 10138    | Hooded Plover             | <i>Thinornis cucullatus</i>         | yes             | 2004            | 2004               |                      |
|                     |     |        |        | 10342    | Horsfield's Bronze-Cuckoo | <i>Chrysococcyx basalis</i>         |                 | 2018            | 2018               |                      |
|                     |     |        |        | 19014    | Inchman Bulldog Ant       | <i>Myrmecia forficata</i>           |                 | 2019            | 2019               |                      |
|                     |     |        |        | 10981    | Kelp Gull                 | <i>Larus dominicanus</i>            | yes             | 1999            | 2000               |                      |
|                     | en  |        |        | 12283    | Lace Monitor              | <i>Varanus varius</i>               |                 |                 |                    | yes                  |
|                     |     |        |        | 10322    | Laughing Kookaburra       | <i>Dacelo novaeguineae</i>          | yes             | 2003            | 2019               | yes                  |
|                     |     |        |        | 10097    | Little Black Cormorant    | <i>Phalacrocorax sulcirostris</i>   |                 | 2018            | 2018               |                      |
|                     |     |        |        | 10100    | Little Pied Cormorant     | <i>Microcarbo melanoleucos</i>      | yes             | 2000            | 2018               |                      |
|                     |     |        |        | 10954    | Little Raven              | <i>Corvus mellori</i>               | yes             | 2009            | 2021               |                      |
|                     |     |        |        | 10637    | Little Wattlebird         | <i>Anthochaera chrysoptera</i>      | yes             | 2004            | 2004               | yes                  |
|                     |     |        |        | 12973    | Lowland Copperhead        | <i>Austrelaps superbus</i>          |                 |                 |                    | yes                  |
|                     |     |        |        | 10415    | Magpie-lark               | <i>Grallina cyanoleuca</i>          |                 |                 |                    | yes                  |
|                     |     |        |        | 11033    | Mainland Dusky Antechinus | <i>Antechinus mimetes</i>           |                 |                 |                    | yes                  |
|                     |     |        |        | 10133    | Masked Lapwing            | <i>Vanellus miles</i>               | yes             | 2001            | 2010               | yes                  |
|                     |     |        |        | 12462    | Metallic Skink            | <i>Carinascincus metallicus</i>     |                 |                 |                    | yes                  |
|                     |     |        |        | 10564    | Mistletoebird             | <i>Dicaeum hirundinaceum</i>        |                 | 2018            | 2018               |                      |
|                     |     |        |        | 6003     | Morepork                  | <i>Ninox novaeseelandiae</i>        |                 |                 |                    | yes                  |
|                     |     |        |        | 10240    | Nankeen Kestrel           | <i>Falco cenchroides</i>            |                 |                 |                    | yes                  |
|                     |     |        |        | 10631    | New Holland Honeyeater    | <i>Phylidonyris novaehollandiae</i> | yes             | 2004            | 2019               | yes                  |
|                     |     |        |        | 10405    | Olive Whistler            | <i>Pachycephala olivacea</i>        |                 | 1991            | 1991               | yes                  |
|                     |     |        |        | 10208    | Pacific Black Duck        | <i>Anas superciliosa</i>            |                 |                 |                    | yes                  |
|                     |     |        |        | 60126    | Pacific Gull              | <i>Larus pacificus</i>              | yes             | 2000            | 2021               | yes                  |
|                     |     |        |        | 10337    | Pallid Cuckoo             | <i>Cacomantis pallidus</i>          |                 |                 |                    | yes                  |
|                     |     |        |        | 10099    | Pied Cormorant            | <i>Phalacrocorax varius</i>         | yes             | 2000            | 2019               |                      |

| Conservation Status |     |        | Origin | Taxon ID | Common Name                   | Scientific Name                        | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|--------|--------|----------|-------------------------------|--|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG | Treaty |        |          |                               |  | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     | vu  |        |        | 10248    | Powerful Owl                  | <i>Ninox strenua</i>                   |                 |                 |                    | yes                  |
|                     |     |        |        | 50240    | Ravens and Crows              | <i>Corvus spp.</i>                     | yes             | 2017            | 2018               |                      |
|                     |     |        | *      | 528552   | Red Fox                       | <i>Vulpes vulpes</i>                   |                 |                 |                    | yes                  |
|                     |     |        |        | 10638    | Red Wattlebird                | <i>Anthochaera carunculata</i>         | yes             | 2004            | 2010               | yes                  |
|                     |     |        |        | 10662    | Red-browed Finch              | <i>Neochmia temporalis</i>             | yes             | 1991            | 2009               | yes                  |
|                     |     | B      |        | 10362    | Rufous Fantail                | <i>Rhipidura rufifrons</i>             |                 | 2003            | 2017               | yes                  |
|                     |     |        |        | 10401    | Rufous Whistler               | <i>Pachycephala rufiventris</i>        |                 |                 |                    | yes                  |
|                     |     |        |        | 10326    | Sacred Kingfisher             | <i>Todiramphus sanctus</i>             |                 |                 |                    | yes                  |
|                     |     | B      |        | 10366    | Satin Flycatcher              | <i>Myiagra cyanoleuca</i>              |                 | 1999            | 1999               |                      |
|                     |     |        |        | 10344    | Shining Bronze-Cuckoo         | <i>Chrysococcyx lucidus</i>            |                 | 2018            | 2018               |                      |
|                     |     |        |        | 11003    | Short-beaked Echidna          | <i>Tachyglossus aculeatus</i>          | yes             | 2019            | 2019               | yes                  |
|                     |     | J R    |        | 10071    | Short-tailed Shearwater       | <i>Ardenna tenuirostris</i>            |                 | 2021            | 2021               |                      |
|                     |     |        |        | 10125    | Silver Gull                   | <i>Chroicocephalus novaehollandiae</i> | yes             | 1999            | 2021               | yes                  |
|                     |     |        |        | 10574    | Silveryeye                    | <i>Zosterops lateralis</i>             | yes             | 1999            | 2019               | yes                  |
|                     |     |        |        | 10131    | Sooty Oystercatcher           | <i>Haematopus fuliginosus</i>          | yes             | 1999            | 2019               | yes                  |
|                     |     |        |        | 10242    | Southern Boobook              | <i>Ninox boobook</i>                   |                 |                 |                    | yes                  |
|                     |     |        |        | 13182    | Southern Brown Tree Frog      | <i>Litoria ewingii</i>                 |                 | 1991            | 1991               |                      |
|                     |     |        |        | 11097    | Southern Long-nosed Bandicoot | <i>Perameles nasuta</i>                |                 | 2013            | 2013               |                      |
| EN                  | en  | B      |        | 11561    | Southern Right Whale          | <i>Eubalaena australis</i>             | yes             | 2010            | 2010               |                      |
|                     |     |        |        | 62956    | Southern Water Skink          | <i>Eulamprus tympanum tympanum</i>     |                 |                 |                    | yes                  |
|                     |     |        | *      | 10989    | Spotted Dove                  | <i>Spilopelia chinensis</i>            | yes             | 2004            | 2009               |                      |
|                     |     |        |        | 10565    | Spotted Pardalote             | <i>Pardalotus punctatus</i>            |                 |                 |                    | yes                  |
|                     |     |        |        | 10470    | Striated Thornbill            | <i>Acanthiza lineata</i>               | yes             | 1991            | 2019               |                      |
|                     |     |        |        | 10269    | Sulphur-crested Cockatoo      | <i>Cacatua galerita</i>                |                 |                 |                    | yes                  |
|                     |     |        |        | 10529    | Superb Fairy-wren             | <i>Malurus cyaneus</i>                 | yes             | 1991            | 2021               | yes                  |
|                     |     |        |        | 10350    | Superb Lyrebird               | <i>Menura novaehollandiae</i>          |                 |                 |                    | yes                  |
|                     |     |        |        | 12681    | Tiger Snake                   | <i>Notechis scutatus</i>               |                 |                 |                    | yes                  |
|                     |     |        |        | 13033    | Victorian Smooth Froglet      | <i>Geocrinia victoriana</i>            |                 |                 |                    | yes                  |
|                     |     |        |        | 12452    | Weasel Skink                  | <i>Saproscincus mustelinus</i>         |                 |                 |                    | yes                  |



| Conservation Status |     |        | Origin | Taxon ID | Common Name                  | Scientific Name                 | Database Record |                 |                    | 2023 Targeted Survey |
|---------------------|-----|--------|--------|----------|------------------------------|---------------------------------|-----------------|-----------------|--------------------|----------------------|
| EPBC                | FFG | Treaty |        |          |                              |                                 | Within Reserve  | Earliest Record | Most Recent Record |                      |
|                     |     |        |        | 10224    | Wedge-tailed Eagle           | <i>Aquila audax</i>             | yes             | 2000            | 2010               | yes                  |
|                     |     |        |        | 10357    | Welcome Swallow              | <i>Hirundo neoxena</i>          | yes             | 1991            | 2019               | yes                  |
|                     | en  | C      |        | 10226    | White-bellied Sea-Eagle      | <i>Haliaeetus leucogaster</i>   | yes             | 2017            | 2020               | yes                  |
|                     |     |        |        | 10488    | White-browed Scrubwren       | <i>Sericornis frontalis</i>     | yes             | 1991            | 2019               | yes                  |
|                     |     |        |        | 10617    | White-eared Honeyeater       | <i>Nesoptilotis leucotis</i>    |                 | 1991            | 1991               |                      |
|                     |     |        |        | 10188    | White-faced Heron            | <i>Egretta novaehollandiae</i>  | yes             | 1999            | 2019               | yes                  |
|                     | vu  |        |        | 11069    | White-footed Dunnart         | <i>Sminthopsis leucopus</i>     |                 |                 |                    | yes                  |
|                     |     |        |        | 10189    | White-necked Heron           | <i>Ardea pacifica</i>           |                 |                 |                    | yes                  |
|                     |     |        |        | 10625    | White-plumed Honeyeater      | <i>Ptilotula penicillata</i>    | yes             | 2004            | 2004               |                      |
| VU                  | vu  | C J R  |        | 10334    | White-throated Needletail    | <i>Hirundapus caudacutus</i>    | yes             | 2017            | 2017               | yes                  |
|                     |     |        |        | 10558    | White-throated Treecreeper   | <i>Cormobates leucophaea</i>    | yes             | 2004            | 2009               | yes                  |
|                     |     |        |        | 10364    | Willie Wagtail               | <i>Rhipidura leucophrys</i>     |                 |                 |                    | yes                  |
|                     |     |        |        | 10267    | Yellow-tailed Black-Cockatoo | <i>Calyptorhynchus funereus</i> |                 | 1991            | 1991               | yes                  |
|                     |     |        |        | 50316    |                              | <i>Phalacrocoracidae spp.</i>   | yes             | 2018            | 2018               |                      |

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Taxon ID – as per the Department of Environment, Land Water and Planning Victorian Biodiversity Atlas (DELWP, 2022c)

Origin - an asterisk (\*) denotes species that are introduced.

#### Source of Database Records:

Department of Environment, Land Water and Planning (2023a) Victorian Biodiversity Atlas fauna records (restricted) - VBA\_FAUNA\_RESTRICTED [ESRI Geodatabase] Data Publication Date: 28th May 2023.

Department of Environment, Land Water and Planning (2023b) Victorian Biodiversity Atlas fauna records (unrestricted) for sites with high spatial accuracy - VBA\_FAUNA25 [ESRI Geodatabase] Data Publication Date: 28th May 2023.

Department of Environment, Land Water and Planning (2023c) Victorian Biodiversity Atlas fauna records (unrestricted) for sites with moderate to low spatial accuracy - VBA\_FAUNA100 [ESRI Geodatabase] Data Publication Date: 28th May 2023.



