Pre-colonial plant list for the City of Melbourne

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Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. In particular, we acknowledge the Traditional Owners of the land to which this work relates, the Wurundjeri Woi Wurrung and Bunurong Boon Wurrung peoples of the Eastern Kulin. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practice.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.

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Front cover photo: Chocolate Lilies (*Arthropodium strictum*), once common in Melbourne (Steve Sinclair).

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Acknowledgements

We acknowledge Lee Harrison (City of Melbourne) for initiating and guiding this project, Marylin Bull (Australian Plants Society) for providing the flora list and location records used in the Flora of Melbourne (Bull and Stolfo 2014), Dr Nicholas Williams (University of Melbourne) for providing useful comments on an earlier draft and for providing additional data and references, and Khorloo Batpurev (ARI) for assistance with data re-shaping. We also acknowledge the Wurundjeri Woi Wurrung Narrap Unit and Dr David Tutchener (Cultural Values and Research Unit, Bunurong Land Council Aboriginal Corporation) for extending their knowledge to this project by providing comments on an early draft of this list.

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Background:

The City of Melbourne (CoM) contracted the Arthur Rylah Institute (ARI) to produce a list of vascular plant species which occurred within its jurisdiction prior to colonisation in 1835.

Methods:

We used the existing list prepared for the Flora of Melbourne as a base list. We used expert judgement, and a relatively small number of definite historical records, to assess the likelihood of occurrence for each species within the CoM. We expressed this likelihood on a 6-point scale. We assigned a separate likelihood to each of 12 different vegetation types which may once have occurred within the CoM.

Results:

We identified 706 species considered at least 'quite likely' to have occurred in the City of Melbourne, including a smaller subset of 412 species considered 'very likely or certain' to have occurred. The results are provided as a spreadsheet.

1 Introduction

The City of Melbourne (CoM) is a municipality which covers the highly urbanised centre of Melbourne (Figure 1). The city requires a list of vascular plant species which occurred within its jurisdiction prior to colonisation in 1835. The list will guide habitat restoration projects and support education and arts projects that foster community connection with nature and history. The CoM contracted the Arthur Rylah Institute (ARI) to produce the plant list, as described here.

The City of Melbourne is ecologically diverse. It is situated where several distinct natural regions meet. At its southern end, the CoM includes sand plains and low dunes, which extend to the south and support the species-rich heathlands and woodlands of the 'sand belt' (described in the early work of Sutton (1911) and Patton (1933)). In its northern and western portions, the CoM includes parts of the extensive lava plain that extends westward into South Australia, characterised by fertile clay soils that support a distinctive grassy flora (Patton 1935, Stuwe and Parsons 1977). In the north east, CoM includes low hills of sedimentary rocks that support Eucalypt woodlands with a rich herbaceous layer, such as those persisting in a degraded state further east within urban Melbourne along the Alamein railway line (Muir 1976) and in parts of Yarra Bend. Flowing through the CoM is the Yarra River, bordered by billabongs in places, steeper banks in others, flowing into a large estuary that was once surrounded by extensive marshlands (Carr 1988). Few places of similar size in Victoria contain such a rich mix of habitats, and the different resources provided by them would have made the area attractive to both Aboriginal and European people. As a result, the pre-colonial flora of the CoM was particularly rich, in comparison with other jurisdictions of comparable size.

The City of Melbourne was the epicentre of colonisation when, in 1835, settlers, farmers and speculators arrived at the mouth of the Yarra and began the settlement that would become Melbourne. Since then, the natural vegetation of the CoM has been almost entirely obliterated by urban and industrial development. Only tiny remnant patches remain, such as those in Royal Park and under the Westgate Bridge (Carr et al. 1992), along with a few isolated individuals of a few species, such as the River Red Gums, Lightwoods and Sweet Bursaria's which remain at the Royal Botanic Gardens (McIntosh and Turner 1998; Muyt 1993). These remnants, like most urban remnants, are generally degraded by disturbance, excess nutrients, the loss of many plant species, and by invasion from exotic species (Bidwell et al. 2006).

Both these factors -the natural richness and the abrupt and severe impacts- coupled with a lack of detailed early records, make compiling an historical flora list for the CoM particularly challenging. Future work could include a more detailed interrogation of oral and historical records.

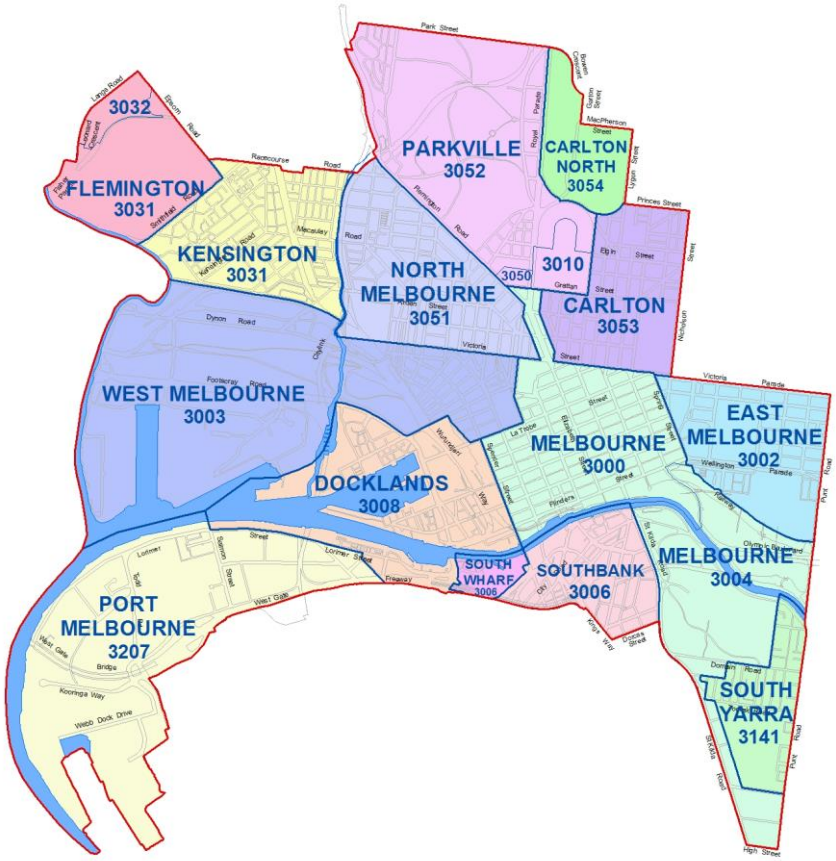

Figure 1. The City of Melbourne and its constituent suburbs.

2 Methods

2.1 Defining the list of candidate species

We used the species list from the Flora of Melbourne (comprising 1068 species; Bull and Stolfo 2014) as a base list for this project, on the assumption that the flora of the CoM forms a subset of the flora of the Greater Melbourne region. We believe it is reasonable to assume that the Flora of Melbourne provides a comprehensive list, as it was generated using a wide range of sources including early specimens, recent species lists and incidental observations, it covers numerous sites from all of the different habitats relevant to the CoM, and has been reviewed and updated over four editions spanning 23 years. Marilyn Bull (Australian Plants Society) kindly provided a digital copy of the species list from the Flora of Melbourne. We updated the taxonomic names of all species (Vicflora Online; www.vicflora.rbg.vic.gov.au).

2.2 Species with certain occurrences backed by direct observation

We assessed all species as being of 'certain' natural occurrence within CoM, or not. To be considered 'certain', we required that the species' occurrence was supported by either a definite historical observation within CoM, a herbarium specimen within CoM, and/or an existing natural occurrence within CoM. Historical observations were sourced from Carr (1988), Carr and Race (1992), Muyt (1993) and McIntosh and Turner (1998). Herbarium records were gleaned from those mentioned within the Flora of Melbourne, from a list of collections by J.H. Minchin from the Domain in the 1880s (kindly provided by Dr Nicholas Williams, University of Melbourne), and using an area-based search in the Atlas of Living Australia (ALA, www.ala.org.au), which includes records from multiple herbaria. Some discretion was required in the interpretation of 'certain' status:

- The labels on many older herbarium specimens are vague with respect to location. We accepted all collections labelled "Port Melbourne" (applied to numerous species) or "Near Port Melbourne" (applied only to a collection of Swamp Everlasting *Coronidum gunnianum*) as 'Certain', but rejected all collections labelled "Port Phillip", "Yarra Yarra" or "Melbourne" as being too imprecise (even if they plot to CoM on the ALA interface).
- Species not known with certainty to be native to Victoria are excluded from being classed as 'Certain', even if they are known to occur within CoM. For example, Water Buttons (*Cotula coronopifolia*) and Drooping Cassinia (*Cassinia sifton*) both now occur naturally in CoM, but are of uncertain origin and may not be native to Victoria (Bull and Stolfo 2014; Vicflora Online).
- Species which definitely occur in Melbourne, but only on artificial substrates, were also excluded. Necklace Fern (*Asplenium flabellifolium*) currently occurs on the stonework of Princes Bridge and the brickwork at Jolimont Station (Sinclair, pers. obs.), but there is no record of a natural occurrence. Similarly, Floodplain Fireweed (*Senecio campylocarpus*) was collected in 2015 within the heavily modified grounds of the Royal Botanic Gardens (MEL MEL 2387401A), but never before.

2.3 Assessing likelihood of former occurrence using expert judgement

Due to incomplete early collection, very few species have definite historical records within the CoM, such that only a very fragmentary picture of the original flora can be constructed from certain records. To fill in the many gaps, we relied on expert judgement. This judgement was guided by observations in habitats outside the CoM which are similar to those once found within CoM. To structure this approach, we started by defining each distinct vegetation type likely to have occurred within the CoM. These are expressed as Ecological Vegetation Classes (EVCs), the primary method used to classify vegetation by the Victorian Government (Oates and Taranto 2001, Bull and Sinclair 2014).

Table 2 lists all of the EVCs we consider relevant, along with notes on their ecology, their likelihood of occurrence within CoM, and references to their source descriptions. These EVCs have been grouped into 12 broad vegetation types, for ease of communication:

- Beach and Dunes
- Cliffs and escarpments
- Coastal marshlands and brackish flats
- Freshwater wetland
- Grasslands and Woodlands on fertile plains
- River banks and creeklines

- Saltmarsh
- Saltwater wetland
- Swamp scrub
- Wet heathland
- Woodlands and forests on sedimentary hills, valleys and ridges
- Woodlands and heathlands on sand

Two botanists with extensive field experience in southern Victoria (Steve Sinclair and Geoff Sutter, ARI; collective experience >45 years of field survey, including surveys close to Melbourne and across Victoria) independently considered every species and, based on the species' occurrence in vegetation elsewhere, judged how likely it was to have once occurred within each vegetation group within the CoM. Each botanist assigned a separate likelihood for each species in each of the 12 vegetation types, using the categories shown in Table 1. Note that the likelihoods are assessed *given that the vegetation type occurred in Melbourne*, and do not include a judgement of whether the vegetation type actually occurred.

Once these individual assessments were completed, we compared the lists of the two botanists, rectified any serious anomalies via a subjective process of discussion, and then created one consensus list representing our joint judgement. Following this, one orchid specialist (Mike Duncan, ARI) provided an assessment of all orchid species; in acknowledgement that many orchids are very rarely seen and require specialist knowledge to make sound judgements on their distributions and ecological preferences.

All species that were assessed as being of 'certain' occurrence within CoM (above) were automatically assigned to the category 'Highly likely or certain to have occurred.'

2.4 The list

The species list resulting from our two-fold assessment described above is presented as an Excel spreadsheet, with the following fields:

- Species: The Latin name for each species.
- Common Name: The Common Name(s) or Indigenous name(s) for each species, as recorded in Bull and Stolfo (2014).
- Certain: A column showing those species that certainly occurred within CoM (1).
- A column for each vegetation type, giving an occurrence code, within colour-coded cells (Table 1).
- Most likely occurrence: A column showing the 'most likely' occurrence code across all vegetation types, as shown in Table 1.

Table 1: Occurrence codes used in the species list to show occurrences within vegetation types.

Code	Description
0	Did not occur
1	Unlikely to have occurred
2.1	Quite likely occurred; if so, at low cover
2.2	Quite likely occurred; if so, may have been prominent in some places (>5% cover)
3.1	Highly likely or certain to have occurred; at low cover.
3.2	Highly likely or certain to have occurred; was prominent in some places (>5% cover)

Table 2. Summary of the vegetation types likely to have occurred within the City of Melbourne.

Each EVC is numbered (in brackets) according to the scheme used by DELWP. Unnumbered EVCs are designated (-). Each is described by one of the following references: 1: Oates and Taranto (2001); 2: DELWP (2016); 3: Boon et al. (2015). The vegetation types are listed in alphabetical order.

Vegetation type used here	Corresponding EVC	Brief description	Comment on likelihood of occurrence and location
Beach and Dunes	Berm Grassy Shrubland (311) [1]	Sparse shrubland or tussock grassland on sand and shell ridges along coast.	Likely, small areas, if well-drained shell grit or sand ridges were present in estuary or along beaches. Carr (1988) suggests this EVC occurred (his 'Costal Salt-bush community').
	Coast Banksia Woodland (2) [1]	Woodland of Coast Banksia (*Banksia integrifolia*) with an understorey of sedges, grasses, small shrubs and bracken, on damp sand beds behind sheltered coasts.	Likely, small areas, extending to Fishermans Bend. Howitt (1855) notes Banksia growing between Liardet's (Port Melbourne) Beach and Emerald Hill (South Melbourne).
	Coastal Dune Grassland (879) [1]	Grassland of Coast Spinifex (*Spinifex sericeus*), on the sand immediately above the high tide line.	Very likely in CoM, definitely known along Port Melbourne Beach just outside CoM.
	Coastal Dune Scrub (160) [1]	Dense scrub of Coast Tea-tree (*Leptospermum laevigatum*) over an understorey of sedges and forbs (including many orchids), on sand dunes behind the beach.	Possible, small areas extending to Fishermans Bend; although early accounts emphasise Banksia, heath and ferns rather than scrub. Carr (1988) notes a single plant of Coast Tea-tree at Port Melbourne, but is unable to determine if it is remnant or planted.
	Coastal Tussock Grassland (163) [1]	Tussock grassland on dunes behind beach, subject to salty winds, often found on lower moister dune swales, on fertile cliff tops or as small open patches within Coastal Dune Scrub.	Possible, but Tussock Grass areas in CoM more likely referrable to Estuarine Flats Grassland.
Cliffs and escarpments	Escarpment Shrubland (895) [1]	Patchy Shrubland growing on near vertical, often rocky slopes.	Possible, very small area on the Yarra bank near Myer Music Bowl (now physically modified and difficult to be certain); could not have occurred elsewhere.
Coastal marshlands and brackish flats	Brackish Grassland (934) [1]	Grassland dominated by Kangaroo Grass (*Themeda triandra*), with forb species tolerant of brackish waterlogging, growing on clay soils at the upper margins of brackish wetlands.	Very likely, possibly extensive, around the inland margin of West Melbourne Swamp, towards the foot of Batman's Hill.
	Brackish Herbland (538) [2]	Low herbland, often of closely matted species, growing on dry brackish flats which rarely receive inundation.	Very likely, in small patches, around West Melbourne Swamp.
	Brackish Lake Bed Herbland (-) [2]	Temporary herbland which forms on the beds of brackish lakes when dry.	Highly likely, in the lagoon of West Melbourne Swamp when dry (See below under Saltwater Wetland). Russell (1837) notes that the lagoon was "at times quite dry". Saline Aquatic Meadow may also have occupied this niche.
	Brackish Lignum Swamp (-) [2]	Shrubland of Tangled Lignum (*Duma florulenta*) growing with a range of salt-tolerant sedges, grasses and herbs in places which are sometimes	Unlikely, but maybe small areas along the lower Maribyrnong, Moonee Ponds Creek, near the Yarra mouth and the West Melbourne Swamp. Occurs naturally in Altona.

Vegetation type used here	Corresponding EVC	Brief description	Comment on likelihood of occurrence and location
		flooded by brackish water for extended periods.	
	Brackish Sedgeland (13) [2]	Sedgeland dominated by salt-tolerant rhizomatous sedges and/or Saw-sedge (*Gahnia* spp.) tussocks, growing on well-drained areas that are sometimes waterlogged by salt water.	Very likely, possibly extensive, along the lower Maribyrnong, Moonee Ponds Creek, near the Yarra mouth and the West Melbourne Swamp. Occurs naturally in Altona.
	Brackish Wetland (Aggregate) (656) [2]	An aggregate term for numerous EVCs.	Certain, in one form or another.
	Coastal Saline Grassland (-) [2]	Grassland dominated by rhizomatous grasses (usually Australian Salt-grass, *Distichlis distichophylla*), sometimes forming mounds, in areas which are waterlogged by brackish water.	Possible, on the lower Yarra Flats. Carr (1988) notes Australian Salt-grass occurring naturally here; however this species occurs in numerous coastal EVCs.
	Estuarine Flats Grassland (914) [1]	Tussock Grassland or sedgeland, dominated by Common or Coast Tussock Grasses (*Poa* spp.) and/or Knobby Club-sedge (*Ficinia nodosa*), usually species-poor, growing on moderately well-drained soils (often sandy flats) that are waterlogged by brackish water at high tides or when water is trapped within a marsh system.	Very likely, probably extensive. Most estuaries that are bordered by extensive flats of sand and silt have bands or patches of Estuarine Flats Grassland, and the Yarra was likely no exception. Probably very prominent on the flats now occupied by the Docklands. Carr (1988) records Coast Tussock Grass in the lower Yarra marshes, strongly suggesting this EVC.
	Estuarine Reedbed (952) [2]	Tall marshland dominated by Common Reed (*Phragmites australis*), growing in near-permanent brackish water, often in bands along the banks of estuaries.	Certain, in small patches, along the banks of the lower Yarra and Moonee Ponds Creek, and in soaks below the CBD. Small patches persist near Dynon Road.
	Estuarine Wetland (10) [2]	Marshland strongly dominated by extensive beds of Sea Rush (*Juncus krausii*), often with virtually no other species, growing on silts that are frequently inundated or waterlogged by salty water.	Certain. Essentially every estuary in Victoria has a high proportion of vegetation dominated by Sea Rush, and the Yarra was likely no exception. May have been the dominant vegetation on all the flats now occupied by the Docklands.
	Saltmarsh-grass Swamp (-) [2]	Sparse grassland dominated by Saltmarsh-grass (*Puccinellia* spp.), generally occurring as small patches at the inner margins of extensive marshlands or lagoons which may be dry or inundated for prolonged periods.	Likely, in patches, around West Melbourne Swamp and the margins of the Yarra estuary.
Freshwater Wetland	Aquatic Herbland (653) [2]	Herbland, often dominated by Water-ribbons (*Cycnogeton* spp.) and Milfoils (*Myriophyllum* spp.), growing in areas that are inundated for	Certain, localised in billabongs and back-swamps of the Yarra, in South Yarra or Richmond, and still persisting in the Royal Botanic Gardens and Moonee Ponds Creek.

Vegetation type used here	Corresponding EVC	Brief description	Comment on likelihood of occurrence and location
		long periods, but sometimes dry.	
	Dwarf Floating Aquatic Herbland (-) [2]	A temporary community of tiny floating herbs that accumulate in still, fresh water.	Probable, localised in billabongs and back-swamps of the Yarra, in South Yarra or Richmond.
	Pains Sedgy Wetland (647) [2]	Stands of sedge species, growing in low-lying areas on fertile plains.	Possible, small patches, in any areas with flat terrain and rich soils, such as the valley of the Moonee Ponds creek.
	Plains Grassy Wetland (125) [2]	Herb-rich grassland, growing on fertile flats where water periodically collects.	Possible, small patches, in any areas with flat terrain and rich soils, such as the valley of the Moonee Ponds creek.
	Plains Rushy Wetland (-) [2]	Stands of rush species, growing in low-lying areas on fertile plains.	Possible, small patches, in any areas with flat terrain and rich soils, such as the valley of the Moonee Ponds creek.
	Sedge Wetland (136) [2]	Dense, tall, species-poor wetland dominated by rhizomatous sedges, growing in lower-fertility wetlands that may sometimes dry out.	Possible, in small areas along freshwater reaches of the floodplains of the Moonee Ponds Creek and Yarra, or in soaks inland.
	Spike-sedge Wetland (-) [2]	Dense, low, species-poor sedgeland of Common Spike-sedge (*Eleocharis acuta*), growing in fertile wetlands that sometimes dry out.	Possible, in small areas along freshwater reaches of the floodplains of the Moonee Ponds Creek and Yarra, or in soaks inland.
	Submerged Aquatic Herbland (-) [2]	Submerged beds of aquatic macrophytes (Eel-grass (*Vallisneria australis*), Milfoils, etc), growing in still or slow moving permanent water.	Highly likely, in the main channel of the Yarra above the 'falls' in Melbourne, and in billabongs in South Yarra or Richmond.
	Tall Marsh (821) [2]	Tall marshland dominated by Common Reed, growing in near-permanent fresh water, still or flowing, including streambanks.	Highly likely, localised in billabongs and back-swamps of the Yarra, in South Yarra or Richmond.
	Wet Verge Sedgeland (932) [2]	Sedgeland growing in wet soaks on the margins of wetlands.	Highly likely, small patches, anywhere where freshwater soaks were present.
Grasslands and Woodlands on fertile plains	Plains Grassland (132) [1]	Treeless Grassland dominated by Kangaroo Grass and a range of forbs, occurring on fertile clays subject to seasonal drought stress and frequent fire.	Unlikely, the recent basalts around Melbourne probably all supported Trees. Occurred just outside CoM, to the west of the Maribyrnong.
	Plains Grassy Woodland (55) [1]	Woodland dominated by River Red Gum (*Eucalyptus camaldulensis*), over a rich grassy layer dominated by Kangaroo Grass, occurring on fertile clays subject to slightly less drought stress and less intense fire regimes than Plains Grassland.	Certain. The basalt areas of the CBD and North Melbourne are known to have supported Red Gums are referrable to this EVC, along with some non-basaltic areas, probably including Faulkner Park and surrounds. Remnant stands survive in Royal Park at Brens Drive.
	Stony Knoll Shrubland (649) [1]	Open shrubland growing over a layer of grasses and forbs, occurring on stony rises resulting from lava flows.	Unlikely, unless the small areas of newer volcanics mapped in Collingwood once supported stony rises which have now been levelled.

Vegetation type used here	Corresponding EVC	Brief description	Comment on likelihood of occurrence and location
	Grassy Woodland (175) [1]	Open woodland dominated by Drooping She-oak (*Allocasuarina verticillata*), Wattles (*Acacia* spp.), Silver Banksia (*Banksia marginata*) and sparse Eucalypts (in CoM, but other species elsewhere) over a rich grassy layer dominated by Kangaroo Grass, occurring on moderately fertile soils subject to some drought stress, and likely frequent burning by traditional owners.	Certain. Batmans Hill (West Melbourne) described by Lancey (1835; in Grieg) as "thinly wooded with honeysuckle and she-oak" with "Good grass" refers to this vegetation. Also possibly occurred in the Domain. This EVC is poorly circumscribed and includes many disparate variants.
River banks and creeklines	Creekline Grassy Woodland (68) [1]	Woodland of River Red Gum, over a ground layer of Common Tussock Grass (*Poa labillardierei*) and a range of inundation-tolerant forbs, growing on low-gradient gullies with fertile soil.	This EVC is very similar to Creekline Herb-rich Woodland, and may have occurred in the same locations; see below.
	Creekline Herb-rich Woodland (164) [1]	Woodland of Swamp Gum (*Eucalyptus ovata*) or River Red Gum, over a ground layer of grasses and herbs tolerant of waterlogging growing on low-gradient flat-bottomed gullies with fertile soil.	Probably occurred in the tributary of Moonee Ponds Creek flowing from Royal Park, and along the former Bouverie Creek running through the CBD along the current alignment of Elizabeth Street, to the Yarra. This EVC is very similar to Creekline Grassy Woodland.
	Creekline Tussock Grassland (654)[1]	Grassland dominated by Common tussock grass, growing in fertile drainage lines and lower slopes.	Possible in any minor drainage line on fertile soils, such as along Moonee Ponds Creek, or in the Central Business District.
	Riparian Woodland (641) [1]	Woodland of River Red Gums, Wattles and other shrubs, tussock grasses and sedges growing on riverbanks and small River terraces.	Certain. Murray (1843) Describes large trees overhanging the water near the CBD.
	Sedgy Swamp Woodland (707) [1]	Woodland of Swamp Gum with a dense sedgy ground layer, on seasonally damp sandy flats.	Possibly small patches near Albert Park Lake.
	Stream Bank Shrubland (851) [1]	Patchy shrubland growing over sedges, reeds and tussock grasses, growing on riverbanks or mid-stream rock barriers.	Possible, in small patches amongst Riparian Woodland, or on any rocks protruded from the rocky barrier crossing the Yarra below the CBD (Murray [1]843).
	Swampy Riparian Woodland (83) [1]	Woodland of Swamp Gum with a dense herbaceous ground layer, on seasonally damp river flats.	Very unlikely. Possible in small areas where minor streams or billabongs joined the Yarra.
Saltmarsh	Coastal Dry Saltmarsh (-) [3]	Low, sparse Herbland dominated by Rounded Noon-flower (*Disphyma crassifolium* ssp. *clavellatum*), growing on dry salty flats which rarely receive inundation.	Certain. The fringe of "pink pigface" (Rounded Noon-flower) around the West Melbourne Swamp described by Macrae in 1912 (in Otto 2005) refers to this vegetation.
	Coastal Hypersaline Saltmarsh (-) [3]	Low, sparse shrubland of Blackseed Glasswort (*Tecticornia pergranulata*) or Grey Glasswort (*T.*	Highly likely, around the margins of West Melbourne Swamp. Carr (1988) recorded Blackseed Glasswort in the lower Yarra area, suggesting this EVC.

Vegetation type used here	Corresponding EVC	Brief description	Comment on likelihood of occurrence and location
		holocnemoides), occurring in 'saltpans' in the upper saltmarsh zone above the reach of regular tides, where evaporation of water from occasional flooding causes salt to accumulate in the soil.	
	Coastal Saltmarsh (Aggregate) (9) [1]	An aggregate term for numerous EVCs.	Certain, in one form or another.
	Coastal Tussock Saltmarsh (-) [3]	Marshland dominated by robust Saw-sedges and Coast Spear-grass (*Austrostipa stipoides*), growing on well-drained sand or shell-grit banks that are waterlogged or occasionally inundated by salt water.	Highly likely. Carr (1988) presumed this community to have occurred in the Yarra estuary, as it does in most large estuaries in Victoria.
	Wet Saltmarsh Herbland (-) [3]	Low herbland dominated by Beaded Glasswort (*Salicornia quniqueflora*)	Certain. Virtually every estuary in Victoria includes patches of Wet Saltmarsh Herbland. Carr (1988) records the main constituent species in the Yarra estuary area.
	Wet Saltmarsh Shrubland (-) [3]	Shrubland of Shrubby Glasswort (*Tecticornia arbuscula*), growing on muds which are inundated by daily tides, but drain regularly.	Likely near the Yarra mouth, not likely extensive. Still occurs just outside CoM at Williamstown.
Saltwater Wetland	Mangrove Shrubland (140) [1]	Low woodland or shrubland of Grey Mangrove (*Avicennia marina*) growing on muds which are inundated deeply and for long periods by daily tides.	Highly likely, in the Yarra Mouth. Mangroves now thrive under the Westgate Bridge, where they were planted. There are apparently no records of Mangroves occurring naturally at the Yarra mouth, but they occur naturally just outside the CoM at Williamstown (Ashton 1972).
	Saline Aquatic Meadow (842) [2]	Sparse submerged herbland of Water-mats, Water-tassels (*Ruppia* and *Lepilanea* spp.) and algae, which grows in ponds which are filled with saline water by tides, and often dry out through evaporation.	Almost certain. The West Melbourne Swamp included a lagoon area which filled with salty water, described by Macrae (in Otto 2005) as "a real lake, intensely blue, nearly oval, and full of the clearest salt water ... fringed gaily all round by pigface" and by Batman (1835) as "a large lagoon…full of swans, ducks, geese, &c". Russell (1837) notes that the lagoon was "at times quite dry". Saline Aquatic Meadow may have alternated with Brackish Lake-bed herbland over wet-dry cycles.
	Sea-grass Meadow (-) [2]	Beds of Sea-grass species growing on sandy substrates in sheltered locations which are permanently or regularly inundated by sea water.	Likely in the Yarra estuary, and possible in the Lagoon of West Melbourne Swamp. The Yarra Estuary is much modified, however Sea-grass Meadow still occurs in Altona (Hirst et al. 2016).
	Brackish Aquatic Herbland (537) [2]	Submerged herbland of salt-tolerant macrophytes growing in near-permanent brackish water.	Possible in West Melbourne Swamp.
Swamp scrub	Estuarine Scrub (953) [1]	Dense scrub of Swamp Paperbark (*Melaleuca ericifolia)* over an understorey of sedges and salt-tolerant	Certain, lower reaches of the Yarra below the 'falls'. Murray (1843) describes "jungle that rose up like a wall on either bank" in the

Vegetation type used here	Corresponding EVC	Brief description	Comment on likelihood of occurrence and location
		forbs, growing on areas that are waterlogged or flooded by salty water.	saline portion of the River. Shown clearly on early maps (Russell 1837)
	Swamp Scrub (53) [1]	Dense scrub of Swamp Paperbark over an understorey of sedges and forbs, growing on waterlogged or flood-prone, fertile flats, above the influence of saline water.	Certain, above the 'falls'. Howitt (1855) notes that "All the swampy and watery river flats… are filled with Tea-tree Scrub." Shown clearly on early maps (Russell 1837)
Wet heathland	Riparian Scrub (191) [1]	Dense tall shrubland of Scented Paperbark (*Melaleuca squarrosa*) growing in infertile sandy soils that are often waterlogged or shallowly inundated by fresh water.	Very unlikely. Possibly occurred near Albert Park Lake and South Melbourne.
	Wet Heathland (8) [1]	Dense low shrubland growing in infertile sandy soils that are often waterlogged by fresh water.	Possibly. The record of Button-grass (*Gymnoschoenus sphaerocephalus*) (MEL 2200256A) from Albert Park suggests wet heathland very close to CoM.
Woodlands and forests on sedimentary hills, valleys and ridges	Valley Grassy Forest (47) [1]	Tall open forest dominated by Yellow Box (*Eucalyptus melliodora*) and River Red Gum over a very species-rich grassy layer dominated by Kangaroo and Tussock Grasses, growing on fertile well-drained soils.	Certain, extensive. Likely common on slopes and in gentle valleys from Parkville, through Carlton and East Melbourne to Richmond.
Woodlands and heathlands on sand	Sand Heathland (6) [1]	Diverse shrubland growing on deep, well-drained nutrient-poor sand.	Unlikely, but possible on sand sheets near the beach near Port Melbourne.
	Damp Heathland (710) [1]	Shrubland growing on nutrient -poor substrates which are often waterlogged.	Unlikely, but possible in small patches at the far southern end of the CoM, near Albert park.
	Damp Heathy Woodland (793) [1]	Eucalypt woodland with a dense understorey of shrubs, growing on nutrient-poor substrates which are often waterlogged.	Unlikely, but possible in small patches at the far southern end of the CoM, near Albert park.
	Damp Sands Herb-rich Woodland (3) [1]	Eucalypt woodland with a dense and diverse understorey of shrubs and forbs, growing on nutrient-poor sand sheets which are often moist.	Almost certain. A record of Showy Bossiaea (*Bossiaea cinerea*) at the Domain strongly suggests the presence of this EVC. Howitt (1855) describes the Tertiary sands between Liardet's (Port Melbourne) Beach and South Melbourne as "Sand, fern and odd sorts of shrub" with Eucalyptus, which may have been this EVC.
	Heathy Woodland (48) [1]	An open Eucalypt woodland with a dense and diverse shrubby understorey, growing on well-drained nutrient-poor sand sheets and dunes.	Possible, in a small area in the far south near Albert Park. Howitt (1855) describes the Tertiary sands between Liardet's (Port Melbourne) Beach and South Melbourne as "Sand, fern and odd sorts of shrub" with Eucalyptus, which may have been this EVC.

3 Results and Discussion

Table 3 shows the results of our assessment, listing the numbers of taxa in each assessment category. The accompanying spreadsheet shows the full results, by species. Table 4 lists all those species judged to be 'certain' or 'highly likely or certain' to have occurred in at least one vegetation type. These species are likely to have been those that formed the bulk of the vegetation within the CoM.

The annotated species list should prove useful for environmental management. For example, the list of species known to have been prominent (Code 3.1) provides a solid guide for those species which should be used frequently in revegetation.

The species list, along with the list of EVC, should also assist in the visualisation of how Melbourne once appeared: A set of low grassy hills wooded with She-oak, Wattle and Gum trees, rising behind an extensive estuarine flat covered in tussock grassland, sedge and reed beds, saltmarsh, and a saline lagoon, divided by a wide river bounded by dense Tea Tree Scrub, all protected from the sea by a band of low dunes covered in scrub. From this generic description of the vegetation types, the list allows us to drill-down into these environments, and see which species occurred where. This ability to visualise helps us understand the history of our place, including the environment which was managed by Traditional Owners, and that which once confronted immigrants arriving at the growing town of Melbourne.

Table 3: Results of assessment

All species in the 'certain' category also occur in categories 3.1 or 3.2. Each species in the numbered categories only occurs in a single category, representing the 'most likely' (highest number) code assigned for any vegetation type.

Occurrence category	Code	Number of species
Unlikely to have occurred	1	358
Quite likely (at low cover)	2.1	252
Quite likely (may have been prominent in places (>5% cover)).	2.2	16
Highly likely or known to have occurred (low cover)	3.1	374
Highly likely or known to have occurred (>5% cover)	3.2	67
Certain	-	178

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Table 4: Species 'highly likely or certain' to have occurred in CoM.

Each species is assigned a code (Table 1, 0 denotes "Did not occur") for each vegetation type. Only species which were assessed with a 3.1 or 3.2 in at least one vegetation type are included here (See accompanying spreadsheet for the full list). Darker Red cells contain higher numbers.

Species	Certain	Beach and Dunes	Saltmarsh	Coastal marshlands	Swamp scrub	Woodlands and heathlands on sand	Woodlands and forests (sedimentary)	Grasslands and Woodlands (plains)	Cliffs and escarpments	River banks and creeklines	Wet heathland	Freshwater wetland	Saltwater wetland	Most likely occurrence
Acacia acinacea		0	0	0	0	0	3.1	2.1	3.1	1	0	0	0	3.1
Acacia dealbata ssp. dealbata		0	0	0	1	2.1	2.1	0	1	3.2	0	0	0	3.2
Acacia implexa	1	1	0	0	0	1	3.1	3.1	3.1	2.1	0	0	0	3.1
Acacia longifolia ssp. sophorae		3.1	0	1	1	1	0	0	0	0	0	0	0	3.1
Acacia mearnsii	1	1	0	1	1	3.1	3.2	3.1	3.1	3.2	1	0	0	3.2
Acacia melanoxylon	1	1	0	1	3.1	3.1	3.1	3.1	3.1	3.2	1	0	0	3.2
Acacia paradoxa	1	1	0	1	2.1	2.1	3.1	2.1	2.1	1	0	0	0	3.1
Acacia pycnantha	1	0	0	0	1	2.1	3.2	3.1	2.1	2.1	0	0	0	3.2
Acacia verticillata var. verticillata		0	0	0	3.1	3.1	0	0	0	3.1	1	0	0	3.1
Acaena echinata	1	0	0	0	0	1	3.1	3.1	3.1	2.1	0	0	0	3.1
Acaena novae-zelandiae	1	1	0	3.1	3.1	2.1	2.1	0	0	2.1	1	0	0	3.1
Acaena ovina	1	0	0	0	0	1	3.1	3.1	3.1	2.1	0	0	0	3.1
Acianthus pusillus		0	0	0	0	3.1	3.1	0	0	0	0	0	0	3.1
Acrotriche serrulata		0	0	0	0	3.1	3.1	0	0	0	0	0	0	3.1
Actites megalocarpus	1	3.1	0	0	0	0	0	0	0	0	0	0	0	3.1
Adiantum aethiopicum		0	0	0	0	3.1	2.1	1	1	2.1	0	0	0	3.1
Alisma plantago-aquatica		0	0	0	0	0	0	0	0	0	0	3.1	0	3.1
Allocasuarina paludosa		0	0	0	0	2.1	0	0	0	0	3.1	0	0	3.1
Allocasuarina paradoxa		0	0	0	0	3.1	0	0	0	0	0	0	0	3.1
Allocasuarina verticillata	1	2.1	0	0	0	2.1	3.2	3.2	3.1	2.1	0	0	0	3.2
Alternanthera denticulata		0	0	0	0	0	0	0	0	2.1	1	3.1	0	3.1
Amperea xiphoclada var. xiphoclada		0	0	0	0	3.1	0	0	0	0	1	0	0	3.1
Amphibromus nervosus		0	0	2.1	0	0	0	0	0	0	0	3.1	0	3.1
Amyema pendula ssp. pendula		0	0	0	0	3.1	3.1	3.1	3.1	3.1	0	0	0	3.1
Angianthus preissianus	1	0	3.1	2.1	0	0	0	0	0	0	0	0	0	3.1
Anthosacne scabra		0	0	0	0	1	3.1	3.1	2.1	1	0	0	0	3.1
Aotus ericoides		0	0	0	0	3.1	0	0	0	0	0	0	0	3.1
Apium annuum		1	1	3.1	0	0	0	0	0	0	0	0	0	3.1
Apium prostratum ssp. prostratum var. filiforme	1	1	0	3.1	1	0	0	0	0	1	0	1	1	3.1

Species	Certain	Beach and Dunes	Saltmarsh	Coastal marshlands	Swamp scrub	Woodlands and heathlands on sand	Woodlands and forests (sedimentary)	Grasslands and Woodlands (plains)	Cliffs and escarpments	River banks and creeklines	Wet heathland	Freshwater wetland	Saltwater wetland	Most likely occurrence
Apium prostratum var. prostratum		1	0	3.1	1	0	0	0	0	1	0	1	1	3.1
Arthropodium minus		0	0	0	0	0	2.1	3.1	3.1	1	0	0	0	3.1
Arthropodium strictum	1	1	0	1	2.1	2.2	3.2	2.2	3.1	3.1	1	0	0	3.2
Asperula conferta		0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Asperula scoparia ssp. scoparia		0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Asplenium flabellifolium ssp. gracillimum		0	0	0	0	0	1	1	3.1	3.1	0	0	0	3.1
Astroloma humifusum		0	0	0	0	3.1	3.1	0	1	1	0	0	0	3.1
Atriplex australasica		1	3.1	3.1	1	0	0	0	0	0	0	0	0	3.1
Atriplex cinerea	1	3.2	3.1	1	0	0	0	0	0	0	0	0	0	3.2
Atriplex paludosa ssp. paludosa		0	3.2	3.1	2.1	0	0	0	0	0	0	0	1	3.2
Atriplex semibaccata	1	0	0	3.1	1	2.1	2.1	3.1	3.1	1	0	0	0	3.1
Atriplex suberecta	1	1	3.1	3.1	1	0	0	0	0	1	0	1	1	3.1
Austrostipa bigeniculata	1	0	0	0	0	0	2.1	3.2	3.1	2.1	0	0	0	3.2
Austrostipa curticoma		0	0	0	0	0	1	3.1	1	1	0	0	0	3.1
Austrostipa elegantissima		0	0	0	0	0	1	0	3.1	0	0	0	0	3.1
Austrostipa flavescens		3.1	0	0	1	1	0	0	0	0	0	0	0	3.1
Austrostipa gibbosa		0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Austrostipa mollis		1	0	0	0	3.1	3.1	2.1	3.1	1	0	0	0	3.1
Austrostipa nodosa	1	0	0	0	0	0	1	3.1	2.1	1	0	0	0	3.1
Austrostipa oligostachya		0	0	0	0	0	1	3.1	1	0	0	0	0	3.1
Austrostipa pubinodis		0	0	0	0	1	3.1	1	0	0	0	0	0	3.1
Austrostipa rudis ssp. rudis		0	0	0	0	1	3.1	1	1	1	0	0	0	3.1
Austrostipa scabra ssp. falcata		0	0	0	0	0	3.1	2.1	3.2	1	0	0	0	3.2
Austrostipa semibarbata		0	0	0	0	1	2.1	3.1	1	0	0	0	0	3.1
Austrostipa setacea		0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Austrostipa stipoides		3.1	3.2	3.1	1	0	0	0	0	0	0	0	0	3.2
Azolla filiculoides		0	0	0	0	0	0	0	0	0	0	3.1	0	3.1
Azolla pinnata		0	0	0	0	0	0	0	0	0	0	3.1	0	3.1
Banksia integrifolia ssp. integrifolia		3.1	0	3.1	3.1	3.1	0	0	2.1	2.1	0	0	0	3.1
Banksia marginata		0	0	0	0	3.1	2.1	1	1	1	1	0	0	3.1
Banksia marginata (tree)		0	0	0	0	2.1	3.1	3.1	3.1	2.1	0	0	0	3.1
Bolboschoenus caldwellii	1	0	1	3.2	1	0	0	0	0	0	0	1	2.2	3.2

Species	Certain	Beach and Dunes	Saltmarsh	Coastal marshlands	Swamp scrub	Woodlands and heathlands on sand	Woodlands and forests (sedimentary)	Grasslands and Woodlands (plains)	Cliffs and escarpments	River banks and creeklines	Wet heathland	Freshwater wetland	Saltwater wetland	Most likely occurrence
Bossiaea cinerea	1	0	0	0	0	3.2	0	0	0	0	0	0	0	3.2
Bossiaea prostrata	1	0	0	0	0	3.1	3.1	2.1	2.1	2.1	1	0	0	3.1
Bothriochloa macra	1	0	0	0	0	0	1	3.1	3.1	1	0	0	0	3.1
Brachyscome graminea		0	1	3.1	3.1	0	0	0	0	0	0	1	1	3.1
Brachyscome parvula		0	0	3.1	1	0	0	0	0	0	0	0	1	3.1
Brunonia australis		0	0	0	0	2.1	3.2	1	2.1	1	0	0	0	3.2
Bulbine bulbosa		0	0	0	0	2.1	3.2	3.1	3.1	2.1	0	0	0	3.2
Burchardia umbellata	1	1	0	0	1	3.2	3.2	3.2	3.1	3.1	1	0	0	3.2
Bursaria spinosa ssp. spinosa	1	2.1	0	0	2.1	3.1	3.2	3.1	3.2	3.1	0	0	0	3.2
Caesia calliantha	1	0	0	0	0	1	3.1	3.1	1	1	0	0	0	3.1
Caladenia carnea		0	0	0	0	3.1	3.1	1	1	1	0	0	0	3.1
Caladenia congesta		0	0	0	0	3.1	2.1	0	0	0	0	0	0	3.1
Caladenia latifolia		3.1	0	0	3.1	3.1	0	0	0	0	1	0	0	3.1
Caladenia parva		0	0	0	0	1	3.1	0	1	1	0	0	0	3.1
Caladenia phaeoclavia		0	0	0	0	1	3.1	0	1	1	0	0	0	3.1
Caladenia tentaculata		0	0	0	1	2.1	3.1	2.1	2.1	1	1	0	0	3.1
Caladenia venusta		0	0	0	0	2.1	3.1	1	1	2.1	1	0	0	3.1
Calandrinia granulifera		3.1	0	0	0	0	1	0	0	0	0	0	0	3.1
Caleana major		0	0	0	0	1	3.1	1	1	1	0	0	0	3.1
Callistemon sieberi		0	0	0	0	0	0	0	0	3.2	0	0	0	3.2
Callitriche sonderi		0	0	0	0	0	0	0	0	0	0	3.1	0	3.1
Callitriche umbonata	1	0	0	0	0	0	0	0	0	0	0	3.1	0	3.1
Calocephalus citreus		0	0	0	0	0	2.1	3.2	1	0	0	0	0	3.2
Calocephalus lacteus	1	0	0	3.1	0	0	0	1	0	0	0	1	1	3.1
Calochilus robertsonii		0	0	0	0	1	3.1	1	0	0	1	0	0	3.1
Calotis anthemoides		0	0	0	0	0	0	3.1	0	0	0	1	0	3.1
Calotis scabiosifolia var. scabiosifolia		0	0	0	0	0	1	3.1	0	0	0	1	0	3.1
Calotis scapigera		0	0	0	0	0	0	3.1	0	0	0	1	0	3.1
Calystegia sepium ssp. roseata		0	0	2.1	0	0	0	0	0	3.1	0	3.1	1	3.1
Cardamine microthrix		0	0	0	3.1	0	0	0	0	1	0	1	0	3.1
Carex appressa		0	0	0	3.1	0	0	0	0	3.2	2.1	3.1	0	3.2
Carex breviculmis	1	0	0	0	1	2.1	3.1	3.1	1	2.1	1	1	0	3.1

Species	Certain	Beach and Dunes	Saltmarsh	Coastal marshlands	Swamp scrub	Woodlands and heathlands on sand	Woodlands and forests (sedimentary)	Grasslands and Woodlands (plains)	Cliffs and escarpments	River banks and creeklines	Wet heathland	Freshwater wetland	Saltwater wetland	Most likely occurrence
Carex fascicularis		0	0	0	0	0	0	0	0	3.2	0	2.1	0	3.2
Carex gaudichaudiana		0	0	0	0	0	0	0	0	3.1	0	2.1	0	3.1
Carex inversa		0	0	1	2.1	3.1	3.1	3.1	1	2.1	1	0	0	3.1
Carex pumila	1	3.1	0	0	0	0	0	0	0	0	0	0	0	3.1
Carpobrotus rossii		3.1	0	3.1	0	0	0	0	0	0	0	0	0	3.1
Cassinia longifolia		0	0	0	0	3.1	3.1	3.1	3.1	3.1	0	0	0	3.1
Cassytha melantha		0	0	0	2.1	2.1	3.1	0	0	2.1	1	0	0	3.1
Cassytha pubescens		0	0	0	2.1	2.1	3.1	0	0	2.1	1	0	0	3.1
Centella cordifolia		0	0	1	3.1	2.1	1	1	0	2.1	2.1	3.1	0	3.1
Centrolepis aristata	1	0	0	0	0	3.1	0	0	0	0	1	3.1	0	3.1
Centrolepis polygyna	1	0	0	3.1	1	0	0	0	0	0	0	2.1	0	3.1
Centrolepis strigosa ssp. strigosa	1	1	0	0	1	3.1	2.1	1	0	0	3.1	2.1	0	3.1
Chamaescilla corymbosa		0	0	0	0	3.1	2.1	1	0	0	1	0	0	3.1
Cheilanthes austrotenuifolia		0	0	0	0	1	3.1	2.1	3.1	3.1	0	0	0	3.1
Cheilanthes sieberi ssp. sieberi		0	0	0	0	0	1	3.1	3.1	1	0	0	0	3.1
Chenopodium glaucum	1	0	3.1	3.1	3.1	0	0	0	0	0	0	1	1	3.1
Chloris truncata	1	0	0	0	0	0	2.1	3.1	2.1	1	0	0	0	3.1
Chrysocephalum apiculatum subsp. apiculatum		0	0	0	0	1	3.1	3.1	1	1	0	0	0	3.1
Chrysocephalum semipapposum		0	0	0	0	1	3.1	2.1	1	1	0	0	0	3.1
Cladium procerum		0	0	1	3.1	0	0	0	0	0	0	2.1	3.1	3.1
Clematis microphylla		2.1	0	2.1	2.1	2.1	3.1	2.1	2.1	2.1	0	0	0	3.1
Comesperma calymega		0	0	0	0	3.1	0	0	0	0	0	0	0	3.1
Comesperma polygaloides	1	0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Comesperma volubile		0	0	0	1	3.1	3.1	0	1	2.1	1	0	0	3.1
Convolvulus angustissimus ssp. angustissimus		0	0	0	0	0	2.1	2.1	3.1	2.1	0	0	0	3.1
Convolvulus angustissimus ssp. omnigracilis	1	0	0	0	0	0	0	3.1	2.1	1	0	0	0	3.1
Coprosma quadrifida		0	0	0	3.1	0	0	0	0	3.1	0	0	0	3.1
Coronidium gunnianum	1	0	0	3.1	0	0	0	1	0	0	0	2.1	0	3.1
Coronidium scorpioides	1	0	0	0	0	1	3.1	0	0	0	0	0	0	3.1
Correa alba var. alba		3.1	0	0	0	0	0	0	0	0	0	0	0	3.1
Correa reflexa var. reflexa		0	0	0	0	3.1	1	0	1	1	1	0	0	3.1
Corunastylis despectans		0	0	0	0	1	3.1	0	1	1	0	0	0	3.1

Species	Certain	Beach and Dunes	Saltmarsh	Coastal marshlands	Swamp scrub	Woodlands and heathlands on sand	Woodlands and forests (sedimentary)	Grasslands and Woodlands (plains)	Cliffs and escarpments	River banks and creeklines	Wet heathland	Freshwater wetland	Saltwater wetland	Most likely occurrence
Corybas diemenicus		3.1	0	0	2.1	1	1	0	0	0	1	0	0	3.1
Cotula australis		1	0	2.1	2.1	3.1	3.1	3.1	2.1	2.1	1	0	0	3.1
Crassula decumbens var. decumbens		1	0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	0	0	0	3.1
Crassula helmsii		0	0	0	1	0	0	0	0	3.1	1	3.1	0	3.1
Crassula sieberiana	1	2.1	0	1	1	3.1	3.1	3.1	3.1	2.1	0	0	0	3.1
Cullen tenax	1	0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Cycnogeton alcockiae		0	0	0	1	0	0	0	0	1	0	3.1	0	3.1
Cycnogeton procerum		0	0	0	2.1	0	0	0	0	1	0	3.1	0	3.1
Cymbonotus preissianus	1	0	0	0	0	0	3.1	3.1	1	0	0	0	0	3.1
Cynoglossum suaveolens	1	0	0	0	0	1	3.1	3.1	2.1	2.1	0	0	0	3.1
Cyperus sanguinolentus	1	0	0	0	0	0	0	0	0	0	1	3.1	0	3.1
Cyrtostylis reniformis		0	0	0	0	2.1	3.1	0	1	1	0	0	0	3.1
Cyrtostylis robusta		3.1	0	1	3.1	3.1	2.1	0	1	1	1	0	0	3.1
Damasonium minus		0	0	0	0	0	0	0	0	0	0	3.1	0	3.1
Daucus glochidiatus	1	0	0	0	0	1	3.1	3.1	2.1	2.1	0	0	0	3.1
Daviesia leptophylla		0	0	0	0	1	3.1	1	0	0	0	0	0	3.1
Dianella amoena	1	0	0	0	0	0	3.1	3.1	1	1	0	0	0	3.1
Dianella brevicaulis		3.2	0	3.1	0	1	1	2.2	1	1	0	0	0	3.2
Dianella longifolia subsp. grandis	1	0	0	1	0	0	2.1	3.1	2.1	1	0	0	0	3.1
Dianella revoluta var. revoluta		3.1	0	2.1	3.1	3.2	3.2	3.2	3.1	2.1	1	0	0	3.2
Dianella tasmanica	1	0	0	0	1	3.1	0	0	1	1	0	0	0	3.1
Dichelachne crinita	1	1	0	0	0	2.1	3.1	3.1	3.1	3.1	0	0	0	3.1
Dichelachne sieberiana		0	0	0	0	1	3.1	0	1	1	0	0	0	3.1
Dichondra repens	1	3.1	0	3.1	3.2	3.2	3.1	3.1	3.1	3.1	3.1	1	0	3.2
Dillwynia cinerascens		0	0	0	0	1	3.1	1	1	1	0	0	0	3.1
Dillwynia glaberrima		0	0	0	0	3.1	0	0	0	0	1	0	0	3.1
Dipodium roseum		1	0	0	1	3.1	3.1	1	1	1	1	0	0	3.1
Disphyma crassifolium ssp. clavellatum	1	3.1	3.2	3.1	0	0	0	0	0	0	0	0	0	3.2
Distichlis distichophylla	1	3.1	3.2	3.2	3.1	0	0	1	0	0	0	0	1	3.2
Diuris behrii		0	0	0	0	0	2.1	3.1	1	0	0	0	0	3.1
Diuris chryseopsis	1	0	0	0	0	1	3.1	3.1	1	0	0	0	0	3.1
Diuris punctata		0	0	0	0	1	3.1	3.1	1	1	0	0	0	3.1

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Diuris sulphurea	1	0	0	0	0	1	3.1	1	1	1	0	0	0	3.1
Drosera aberrans		0	0	0	1	2.1	3.1	3.1	1	2.1	1	0	0	3.1
Drosera auriculata		0	0	0	1	3.1	3.1	3.1	1	2.1	1	0	0	3.1
Drosera peltata	1	0	0	0	1	3.1	3.1	3.1	3.1	3.1	1	0	0	3.1
Dysphania pumilio	1	0	0	0	0	0	0	3.1	3.1	0	0	0	0	3.1
Einadia nutans ssp. nutans	1	1	0	1	0	0	3.1	3.1	3.1	3.1	0	0	0	3.1
Einadia trigonos	1	0	0	0	0	0	1	1	0	3.1	0	0	0	3.1
Elatine gratioloides		0	0	0	0	0	0	0	0	3.1	0	3.1	0	3.1
Eleocharis acuta		0	0	1	1	0	0	0	0	3.1	1	3.2	0	3.2
Enchylaena tomentosa var. tomentosa	1	1	0	0	0	0	2.1	2.1	3.1	1	0	0	0	3.1
Epacris impressa		0	0	0	1	3.1	3.1	0	0	1	3.1	0	0	3.1
Epilobium billardierianum ssp. billardierianum	1	1	0	3.1	3.1	1	1	1	1	2.1	1	2.1	0	3.1
Epilobium hirtigerum	1	1	0	3.1	1	1	1	3.1	1	3.1	1	2.1	0	3.1
Eragrostis brownii	1	0	0	1	1	2.1	3.1	3.1	1	2.1	2.1	3.1	0	3.1
Eragrostis parviflora		0	1	3.1	0	0	0	0	0	1	0	1	0	3.1
Eriochilus cucullatus		0	0	0	0	1	3.1	3.1	1	1	0	0	0	3.1
Erodium crinitum	1	0	0	0	0	0	0	3.1	2.1	1	0	0	0	3.1
Eryngium ovinum		0	0	1	0	0	1	3.1	1	1	0	0	0	3.1
Eryngium vesiculosum		0	0	0	0	0	0	1	0	0	0	3.1	0	3.1
Eucalyptus camaldulensis var. camaldulensis	1	0	0	0	0	1	3.2	3.2	3.2	3.2	0	0	0	3.2
Eucalyptus melliodora	1	0	0	0	0	1	3.1	3.1	3.1	3.1	0	0	0	3.1
Eucalyptus ovata var. ovata		0	0	0	1	3.1	1	1	0	3.1	2.1	0	0	3.1
Euchiton involucratus	1	0	0	1	1	1	1	1	1	3.1	1	1	0	3.1
Euchiton japonicus		1	0	1	1	3.1	3.1	3.1	2.1	3.1	0	0	0	3.1
Euchiton sphaericus		1	0	1	1	3.1	3.1	3.1	2.1	3.1	0	0	0	3.1
Euphorbia drummondii		0	0	0	0	0	3.1	3.1	2.1	0	0	0	0	3.1
Exocarpos cupressiformis		1	0	1	3.1	3.2	3.2	3.2	3.2	3.2	1	0	0	3.2
Ficinia nodosa	1	2.2	1	3.2	3.1	2.1	0	0	0	1	0	1	1	3.2
Frankenia pauciflora var. gunnii	1	0	3.1	0	0	0	0	0	0	0	0	0	0	3.1
Gahnia filum		0	3.2	3.1	3.1	0	0	0	0	0	0	0	2.1	3.2
Geranium gardneri	1	0	0	0	0	1	3.1	1	1	3.1	0	0	0	3.1
Glossodia major		1	0	0	0	1	3.1	3.1	2.1	2.1	0	0	0	3.1

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Glycine clandestina		0	0	0	1	3.1	3.1	1	1	3.1	0	0	0	3.1
Glycine latrobeana		0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Glycine tabacina	1	0	0	0	0	0	0	3.1	3.1	2.1	0	0	0	3.1
Gnaphalium indutum		1	0	0	0	1	2.1	3.1	0	0	0	0	0	3.1
Gonocarpus tetragynus	1	0	0	0	0	3.1	3.1	1	1	1	1	0	0	3.1
Goodenia geniculata	1	0	0	0	0	3.1	1	0	0	0	0	0	0	3.1
Goodenia ovata	1	1	0	1	2.1	2.1	1	0	2.1	3.2	2.1	0	0	3.2
Goodenia pinnatifida	1	0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Gratiola peruviana		0	0	0	0	0	0	0	0	0	0	3.1	0	3.1
Gynatrix pulchella		0	0	0	0	0	0	0	2.1	3.1	0	0	0	3.1
Hardenbergia violacea	1	0	0	0	0	2.1	3.1	0	2.1	1	0	0	0	3.1
Hemichroa pentandra		0	3.1	0	0	0	0	0	0	0	0	0	0	3.1
Hibbertia fasciculata var. prostrata	1	0	0	0	0	3.1	0	0	0	0	0	0	0	3.1
Hibbertia riparia		0	0	0	0	3.1	2.1	0	0	0	0	0	0	3.1
Hibbertia sericea var. sericea		0	0	0	0	3.1	0	0	0	0	0	0	0	3.1
Hovea heterophylla		0	0	0	0	2.1	3.1	0	0	0	0	0	0	3.1
Hydrocotyle capillaris	1	0	1	3.1	0	1	1	1	1	0	0	0	0	3.1
Hydrocotyle laxiflora	1	1	0	1	2.1	3.1	3.1	1	1	3.1	0	0	0	3.1
Hypericum gramineum	1	0	0	1	0	1	3.1	3.1	2.1	1	0	0	0	3.1
Hypolaena fastigata		1	0	0	0	3.1	0	0	0	0	1	0	0	3.1
Hypoxis glabella var. glabella		0	0	1	0	1	3.1	3.1	1	1	0	1	0	3.1
Indigofera australis		0	0	0	1	2.1	3.1	1	2.1	3.1	0	0	0	3.1
Isolepis cernua var. cernua	1	1	2.1	3.1	2.1	0	0	1	0	1	0	0	0	3.1
Isolepis fluitans var. fluitans		0	0	0	0	0	0	0	0	3.1	0	1	0	3.1
Isolepis marginata	1	0	0	0	1	3.1	3.1	3.1	1	1	1	0	0	3.1
Isolepis producta		0	0	0	0	0	0	0	0	3.1	0	3.1	0	3.1
Juncus amabilis		0	0	0	2.1	0	0	0	0	2.1	1	3.1	0	3.1
Juncus australis		0	0	0	1	0	0	0	0	2.1	1	3.1	0	3.1
Juncus flavidus		0	0	0	0	0	0	1	0	3.1	1	3.1	0	3.1
Juncus gregiflorus		0	0	0	0	0	0	1	0	3.1	0	3.1	0	3.1
Juncus holoshoenus	1	0	0	1	0	0	0	0	0	2.1	0	3.1	0	3.1
Juncus krausii ssp. australiensis	1	1	3.2	2.2	3.1	0	0	0	0	0	0	0	2.1	3.2

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Juncus pallidus	1	1	0	2.1	3.1	3.1	3.1	1	0	3.1	2.1	1	0	3.1
Juncus revolutus		1	1	3.1	0	0	0	0	0	0	0	0	0	3.1
Juncus subsecundus	1	0	0	1	1	3.1	3.1	3.1	2.1	3.1	1	0	0	3.1
Kennedia prostrata	1	1	0	0	1	3.1	3.1	2.1	2.1	2.1	1	0	0	3.1
Lachnagrostis aemula		0	0	0	1	1	2.1	3.1	0	1	0	0	0	3.1
Lachnagrostis filiformis	1	2.1	1	3.1	3.1	3.1	3.1	3.1	1	2.1	2.1	3.1	0	3.1
Lagenophora huegelii		0	0	0	0	1	3.1	1	0	0	0	0	0	3.1
Lagenophora stipitata		0	0	0	2.1	3.1	2.1	0	0	0	0	0	0	3.1
Laphangium luteo-album	1	3.1	1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	1	1	0	3.1
Lawrencia spicata		0	3.1	0	0	0	0	0	0	0	0	0	0	3.1
Lemna disperma		0	0	0	0	0	0	0	0	0	0	3.1	0	3.1
Lepidium aschersonii		0	3.1	3.1	0	0	0	0	0	0	0	0	1	3.1
Lepidium hyssopifolium	1	0	0	2.1	0	0	0	3.1	0	0	0	0	0	3.1
Lepidium pseudohyssopifolium	1	0	0	2.1	0	0	0	3.1	0	1	0	0	0	3.1
Lepidium pseudotasmanicum		0	0	0	0	0	2.1	1	3.1	0	0	0	0	3.1
Lepidosperma concavum		2.2	0	1	0	3.2	0	0	0	0	0	0	0	3.2
Lepidosperma gladiatum		3.2	0	1	0	1	0	0	0	0	0	0	0	3.2
Lepidosperma laterale		0	0	0	0	1	3.1	0	2.1	3.1	0	0	0	3.1
Lepidosperma longitudinale		0	0	0	1	2.1	0	0	0	0	3.1	1	0	3.1
Lepilaena cylindrocarpa	1	0	0	0	0	0	0	0	0	0	0	2.1	3.2	3.2
Leptinella longipes	1	0	0	3.1	2.1	0	0	0	0	1	0	1	0	3.1
Leptinella reptans		1	0	3.1	2.1	0	0	0	0	1	1	0	0	3.1
Leptorhynchos elongatus		0	0	0	0	1	3.1	1	0	0	0	0	0	3.1
Leptorhynchos squamatus ssp. squamatus	1	0	0	0	0	3.1	3.2	3.2	1	1	0	0	0	3.2
Leptorhynchos tenuifolius		0	0	2.1	0	2.1	3.1	2.1	0	2.1	0	1	0	3.1
Leptospermum continentale		1	0	1	2.1	3.1	2.1	0	0	0	3.2	0	0	3.2
Leptospermum myrsinoides		1	0	0	0	3.2	0	0	0	0	1	0	0	3.2
Leucophyta brownii		3.1	0	0	0	0	0	0	0	0	0	0	0	3.1
Leucopogon parviflorus		3.2	0	2.1	2.1	2.1	0	0	0	0	0	0	0	3.2
Leucopogon virgatus	1	0	0	0	1	3.1	3.1	0	0	0	0	0	0	3.1
Levenhookia dubia	1	0	0	0	0	1	3.1	3.1	1	0	0	1	0	3.1
Limonium australe		0	3.1	1	0	0	0	0	0	0	0	0	0	3.1

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Lindsaea linearis		0	0	0	1	3.1	0	0	0	0	3.1	0	0	3.1
Linum marginale		0	0	0	0	0	3.1	2.1	1	0	0	0	0	3.1
Lobelia irrigua	1	0	1	3.1	1	0	0	0	0	1	0	1	1	3.1
Lobelia pratioides		0	0	3.1	2.1	0	0	0	0	1	0	1	1	3.1
Lomandra filiformis ssp. coriacea	1	0	0	0	0	3.1	3.2	3.1	3.1	3.1	1	0	0	3.2
Lomandra filiformis ssp. filiformis	1	0	0	0	0	1	3.1	2.1	1	1	0	0	0	3.1
Lomandra longifolia var. longifolia		2.1	0	1	2.1	3.2	2.1	1	3.1	3.2	1	0	0	3.2
Lomandra micrantha ssp. micrantha		0	0	0	0	0	2.1	3.1	1	1	0	0	0	3.1
Lomandra nana	1	0	0	0	0	2.1	2.1	3.1	2.1	1	0	0	0	3.1
Lotus australis var. australis	1	2.1	0	1	0	0	1	3.1	0	0	0	0	0	3.1
Luzula meridionalis var. densiflora		0	0	0	0	2.1	3.1	2.1	1	2.1	0	0	0	3.1
Luzula meridionalis var. meridionalis	1	0	0	0	0	2.1	3.1	2.1	1	2.1	0	0	0	3.1
Lycopus australis		0	0	0	1	0	0	0	0	3.1	0	1	0	3.1
Lythrum salicaria		0	0	0	0	0	0	0	0	2.1	0	3.1	0	3.1
Machaerina acuta	1	0	0	1	1	2.1	0	0	0	0	3.1	1	0	3.1
Machaerina articulata		0	0	0	1	0	0	0	0	1	0	3.1	0	3.1
Machaerina juncea		0	0	3.1	2.1	1	0	0	0	0	1	2.1	1	3.1
Maireana enchylaenoides	1	0	0	0	0	0	1	2.1	3.1	0	0	0	0	3.1
Malva preissiana	1	0	2.1	2.1	1	0	0	0	0	3.1	0	0	0	3.1
Marsilea drummondii		0	0	0	0	0	0	1	0	0	0	3.1	0	3.1
Melaleuca ericifolia	1	0	0	3.1	3.2	1	0	0	0	3.1	3.2	0	0	3.2
Melicytus angustifolius subsp. divaricatus		0	0	0	0	0	0	3.1	3.1	0	0	0	0	3.1
Melicytus dentatus		0	0	0	0	0	2.1	3.1	3.1	3.2	0	0	0	3.2
Mentha australis		0	0	0	1	0	0	0	0	3.1	0	0	0	3.1
Mentha diemenica var. diemenica		0	0	0	0	0	1	1	0	3.1	0	0	0	3.1
Microlaena stipoides var. stipoides	1	1	0	1	3.1	3.1	3.2	3.2	3.2	3.2	2.1	0	0	3.2
Microseris walteri	1	1	0	1	1	2.2	3.2	3.2	3.1	3.1	1	0	0	3.2
Microtis arenaria	1	2.1	0	2.1	1	3.1	3.1	1	1	1	1	0	0	3.1
Microtis parviflora	1	0	0	0	1	3.1	3.1	1	1	1	2.1	0	0	3.1
Microtis unifolia	1	1	0	0	0	1	3.1	2.1	1	1	0	0	0	3.1
Mimulus repens		0	2.1	3.1	2.1	0	0	0	0	0	0	1	2.1	3.1
Montia australasica		0	0	1	2.1	0	0	0	0	1	0	3.1	0	3.1

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Montia fontana ssp. chondrosperma		0	0	1	3.1	0	0	0	0	1	0	2.1	0	3.1
Muehlenbeckia adpressa		3.1	0	2.1	1	0	0	0	0	0	0	0	0	3.1
Muellerina eucalyptoides	1	0	0	0	0	1	3.1	3.1	3.1	3.1	0	0	0	3.1
Myoporum insulare		3.1	0	3.1	3.1	0	0	0	0	0	0	0	0	3.1
Myoporum petiolatum	1	0	0	0	0	0	3.1	0	2.1	0	0	0	0	3.1
Myosotis australis		2.1	0	2.1	2.1	3.1	1	0	2.1	2.1	0	0	0	3.1
Myriophyllum crispatum		0	0	0	0	0	0	0	0	1	0	3.1	0	3.1
Myriophyllum verrucosum		0	0	0	0	0	0	0	0	0	0	3.1	1	3.1
Nicotiana suaveolens	1	1	0	0	0	0	0	0	3.1	1	0	0	0	3.1
Olearia axillaris	1	3.1	0	0	0	0	0	0	0	0	0	0	0	3.1
Olearia glutinosa		3.1	0	0	0	0	0	0	0	0	0	0	0	3.1
Olearia ramulosa var. ramulosa		1	0	0	0	3.1	1	0	0	0	0	0	0	3.1
Opercularia varia		0	0	0	0	3.1	2.1	0	0	2.1	0	0	0	3.1
Ornduffia reniformis		0	0	0	1	0	0	0	0	0	1	3.1	0	3.1
Ottelia ovalifolia ssp. ovalifolia		0	0	0	0	0	0	0	0	0	0	3.1	0	3.1
Oxalis perennans	1	0	0	2.1	1	2.1	3.1	3.2	2.1	3.1	1	0	0	3.2
Ozothamnus ferrugineus	1	0	0	0	0	1	3.1	1	1	2.1	0	0	0	3.1
Ozothamnus turbinatus		3.1	0	0	0	0	0	0	0	0	0	0	0	3.1
Panicum effusum		0	0	0	0	0	1	2.1	3.1	0	0	0	0	3.1
Patersonia fragilis		0	0	0	0	1	0	0	0	0	3.1	0	0	3.1
Pelargonium littorale		3.1	0	0	0	0	0	0	0	0	0	0	0	3.1
Pelargonium rodneyanum	1	0	0	0	0	0	3.1	3.1	1	1	0	0	0	3.1
Pentapogon quadrifidus var. quadrifidus		0	0	0	0	2.1	3.1	3.1	1	0	0	0	0	3.1
Persicaria decipiens	1	0	0	0	2.1	0	0	0	0	3.1	0	3.1	0	3.1
Persicaria hydropiper	1	0	0	0	1	0	0	0	0	3.1	0	3.1	0	3.1
Persicaria lapathifolia		0	0	0	1	0	0	0	0	3.1	0	3.1	0	3.1
Persicaria praetermissa		0	0	0	1	0	0	0	0	3.1	0	3.1	0	3.1
Persicaria prostrata		0	0	0	0	0	0	1	1	3.1	0	1	0	3.1
Persicaria subsessilis		0	0	0	1	0	0	0	0	3.1	0	3.1	0	3.1
Phragmites australis	1	1	1	3.2	3.1	0	0	0	0	3.2	1	3.2	3.1	3.2
Pimelea curviflora var. 1	1	0	0	0	0	1	3.1	3.1	3.1	1	0	0	0	3.1
Pimelea glauca	1	0	0	0	0	0	1	3.1	3.1	1	0	0	0	3.1

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Pimelea humilis	1	0	0	1	1	3.1	3.1	3.1	3.1	2.1	0	0	0	3.1
Pimelea spinescens ssp. spinescens		0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Plantago gaudichaudii		0	0	0	0	0	3.1	3.1	2.1	1	0	0	0	3.1
Plantago varia		0	0	0	1	1	3.1	1	0	0	0	0	0	3.1
Platylobium obtusangulum	1	0	0	0	0	3.1	2.1	0	0	0	0	0	0	3.1
Poa labillardierei var. labillardierei	1	0	0	2.2	3.1	3.1	2.1	3.1	1	3.2	1	3.1	0	3.2
Poa morrisii		0	0	0	0	2.1	3.2	2.1	2.1	2.1	0	0	0	3.2
Poa poiformis var. poiformis	1	3.1	0	3.2	1	0	0	0	0	0	0	0	0	3.2
Poa sieberiana var. hirtella		0	0	0	0	0	2.1	3.1	1	1	0	0	0	3.1
Poa sieberiana var. sieberiana		0	0	0	0	1	3.2	2.1	1	1	0	0	0	3.2
Podolepis jaceoides		0	0	0	0	0	3.1	2.1	1	1	0	0	0	3.1
Podolepis linearifolia		0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Pomaderris paniculosa ssp. paralia		3.1	0	0	0	1	0	0	0	0	0	0	0	3.1
Poranthera microphylla		1	0	0	2.1	3.1	3.1	2.1	2.1	2.1	1	0	0	3.1
Portulaca oleracea	1	1	0	1	0	0	1	3.1	2.1	2.1	0	0	0	3.1
Potamogeton cheesmanii		0	0	0	0	0	0	0	0	1	0	3.1	0	3.1
Potamogeton crispus		0	0	0	0	0	0	0	0	1	0	3.1	1	3.1
Potamogeton ochreatus		0	0	0	0	0	0	0	0	1	0	3.1	0	3.1
Prostanthera lasianthos var. lasianthos		0	0	0	0	0	1	0	0	3.1	0	0	0	3.1
Pteridium esculentum	1	3.1	0	2.1	3.1	3.2	3.1	0	1	1	2.1	0	0	3.2
Pterostylis nana		1	0	0	0	2.1	3.1	1	1	0	0	0	0	3.1
Pterostylis nutans		0	0	0	1	3.1	3.1	0	1	1	1	0	0	3.1
Pterostylis pedunculata		1	0	0	3.1	3.1	3.1	0	1	1	1	0	0	3.1
Pterostylis truncata		0	0	0	0	0	1	3.1	1	0	0	0	0	3.1
Ptilotus macrocephalus		0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Ptilotus spathulatus forma spathulatus	1	0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Puccinellia perlaxa	1	0	3.1	3.1	0	0	0	0	0	0	0	0	2.1	3.1
Puccinellia stricta	1	0	3.1	3.1	0	0	0	0	0	0	0	0	2.1	3.1
Pycnosorus chrysanthes	1	0	0	1	0	0	0	3.1	0	0	0	2.1	0	3.1
Pyrorchis nigricans		0	0	0	0	3.1	1	0	0	0	0	0	0	3.1
Ranunculus amphitrichus		0	0	0	0	0	0	0	0	2.1	0	3.1	0	3.1
Ranunculus inundatus		0	0	0	0	0	0	0	0	1	0	3.1	0	3.1

Species	Certain	Beach and Dunes	Saltmarsh	Coastal marshlands	Swamp scrub	Woodlands and heathlands on sand	Woodlands and forests (sedimentary)	Grasslands and Woodlands (plains)	Cliffs and escarpments	River banks and creeklines	Wet heathland	Freshwater wetland	Saltwater wetland	Most likely occurrence
Ranunculus lappaceus		0	0	0	0	2.1	3.1	1	0	1	0	0	0	3.1
Rhagodia candolleana ssp. candolleana	1	3.1	0	3.1	2.1	2.1	1	0	1	1	0	0	0	3.1
Ricinocarpos pinifolius	1	1	0	0	0	3.1	0	0	0	0	0	0	0	3.1
Rubus parvifolius		0	0	1	0	1	0	0	2.1	3.1	1	0	0	3.1
Rumex bidens		0	0	0	0	0	0	0	0	1	0	3.1	0	3.1
Rumex brownii		0	0	2.1	0	1	2.1	3.1	1	1	0	0	0	3.1
Rumex dumosus		0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Ruppia megacarpa		0	0	1	0	0	0	0	0	0	0	0	3.1	3.1
Ruppia polycarpa		0	0	1	0	0	0	0	0	0	0	2.1	3.1	3.1
Ruppia tuberosa	1	0	0	1	0	0	0	0	0	0	0	0	3.1	3.1
Rytidosperma caespitosum	1	1	0	3.1	1	3.1	2.2	3.2	2.1	2.1	0	0	0	3.2
Rytidosperma duttonianum	1	0	0	2.1	0	0	1	3.1	1	2.1	0	3.1	0	3.1
Rytidosperma auriculatum	1	0	0	0	0	0	1	3.1	1	1	0	0	0	3.1
Rytidosperma bipartitum	1	0	0	0	0	0	0	3.1	0	1	0	1	0	3.1
Rytidosperma carphoides var. carphoides	1	0	0	0	0	0	0	3.1	1	0	0	0	0	3.1
Rytidosperma erianthum		0	0	0	0	1	3.2	3.1	3.1	1	0	0	0	3.2
Rytidosperma fulvum		0	0	0	0	1	3.1	3.1	3.1	1	0	0	0	3.1
Rytidosperma geniculatum	1	0	0	0	0	2.1	3.1	1	1	1	1	0	0	3.1
Rytidosperma penicillatum		0	0	0	1	3.1	3.1	1	1	2.1	1	0	0	3.1
Rytidosperma pilosum var. pilosum		0	0	0	0	2.1	3.1	0	0	1	0	0	0	3.1
Rytidosperma racemosum	1	1	0	1	1	3.1	3.1	3.1	2.1	3.1	1	0	0	3.1
Rytidosperma setaceum var. setaceum		1	0	3.1	1	3.1	3.2	3.2	2.1	2.1	0	0	0	3.2
Salicornia quinqueflora ssp. quinqueflora	1	2.1	3.2	2.1	1	0	0	0	0	0	0	0	2.1	3.2
Salsola tragus ssp. pontica	1	1	1	3.1	0	0	0	0	0	0	0	0	0	3.1
Samolus repens	1	1	3.1	3.1	3.1	0	0	0	0	0	0	0	2.1	3.1
Schenkia australis	1	0	1	3.1	0	0	0	2.1	0	0	0	0	0	3.1
Schizaea bifida		0	0	0	0	1	0	0	0	0	3.1	0	0	3.1
Schoenoplectus pungens	1	1	1	3.2	0	0	0	0	0	0	0	2.1	1	3.2
Schoenoplectus tabernaemontani		0	0	0	2.1	0	0	0	0	3.1	0	2.2	0	3.1
Schoenus apogon		1	0	2.1	1	3.1	3.1	3.1	2.1	3.1	1	1	0	3.1
Schoenus nitens		0	1	3.1	2.1	1	0	0	0	0	1	1	1	3.1
Sebaea albidiflora		0	3.1	2.1	0	0	0	0	0	0	0	0	0	3.1

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Sebaea ovata	1	0	0	1	0	0	3.1	3.1	1	0	0	0	0	3.1
Selliera radicans		0	3.1	3.1	3.1	0	0	0	0	0	0	0	0	3.1
Senecio cunninghamii var. cunninghamii	1	0	0	2.1	0	0	0	3.1	0	0	0	0	0	3.1
Senecio hispidulus	1	2.1	0	2.1	2.1	2.1	3.1	1	2.1	2.1	1	0	0	3.1
Senecio macrocarpus		0	0	1	0	0	0	3.1	0	0	0	0	0	3.1
Senecio minimus		1	0	1	3.1	1	1	0	0	2.1	1	0	0	3.1
Senecio pinnatifolius var. lanceolatus		3.1	0	3.1	2.1	1	1	0	0	0	0	0	0	3.1
Senecio quadridentatus	1	2.1	0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	1	0	3.1
Solenogyne dominii		0	0	0	0	1	3.1	3.2	2.1	2.1	0	0	0	3.2
Solenogyne gunnii		0	0	0	0	2.1	3.1	3.1	2.1	2.1	0	0	0	3.1
Spergularia marina		2.1	3.1	2.1	0	0	0	1	1	0	0	0	0	3.1
Spinifex sericeus	1	3.2	0	0	0	0	0	0	0	0	0	0	0	3.2
Stackhousia monogyna		0	0	0	0	1	3.1	1	1	2.1	0	0	0	3.1
Stackhousia spathulata		3.1	0	0	0	0	0	0	0	0	0	0	0	3.1
Stackhousia subterranea		0	0	0	0	0	0	3.1	0	0	0	0	0	3.1
Stuartina muelleri		1	0	0	0	2.1	3.1	3.1	1	0	0	0	0	3.1
Stuckenia pectinatus	1	0	0	3.1	0	0	0	0	0	0	0	3.1	3.1	3.1
Stylidium graminifolium		0	0	0	0	2.1	3.1	0	0	1	0	0	0	3.1
Stylidium inundatum	1	0	0	0	2.1	3.1	0	0	0	0	0	1	0	3.1
Suaeda australis	1	1	3.2	3.1	3.1	0	0	0	0	0	0	0	0	3.2
Tecticornia arbuscula	1	0	3.2	0	0	0	0	0	0	0	0	0	0	3.2
Tecticornia pergranulata ssp. pergranulata	1	0	3.2	0	0	0	0	0	0	0	0	0	0	3.2
Tetragonia implexicoma	1	3.1	1	1	1	0	0	0	0	0	0	0	0	3.1
Tetragonia tetragonioides	1	3.1	1	2.1	1	0	0	0	0	0	0	0	0	3.1
Thelymitra arenaria		0	0	0	0	0	3.1	3.1	1	1	0	0	0	3.1
Thelymitra epipactoides		1	0	0	2.1	3.1	2.1	0	0	0	2.1	0	0	3.1
Thelymitra ixioides		0	0	0	0	2.1	3.1	1	1	1	0	0	0	3.1
Thelymitra pauciflora		0	0	1	0	3.1	3.1	3.1	3.1	2.1	0	0	0	3.1
Thelymitra rubra		0	0	0	0	2.1	3.1	1	1	1	0	0	0	3.1
Themeda triandra	1	1	0	2.1	0	2.1	3.2	3.2	3.1	3.1	1	0	0	3.2
Thysanotus patersonii		0	0	0	1	3.1	3.1	1	1	1	1	0	0	3.1
Thysanotus tuberosus ssp. tuberosus		0	0	0	0	3.1	2.1	0	0	0	0	0	0	3.1

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Trachymene composita var. composita	1	1	0	0	0	3.1	0	0	0	0	1	0	0	3.1
Tricoryne elatior	1	0	0	0	0	2.1	3.1	3.1	3.1	1	0	0	0	3.1
Triglochin minutissima	1	0	3.1	0	0	0	0	0	0	0	0	0	0	3.1
Triglochin mucronata	1	0	3.1	0	0	0	0	0	0	0	0	0	0	3.1
Triglochin striata	1	1	3.2	3.1	3.1	0	0	0	0	1	1	1	1	3.2
Triptilodiscus pygmaeus	1	0	0	0	0	0	3.1	3.1	2.1	0	0	0	0	3.1
Typha domingensis		0	0	1	0	0	0	0	0	1	0	3.1	0	3.1
Typha orientalis		0	0	1	0	0	0	0	0	1	0	3.1	0	3.1
Urtica incisa		0	0	1	3.1	0	0	0	0	1	0	2.1	0	3.1
Velleia paradoxa		0	0	0	0	1	3.1	3.2	1	0	0	0	0	3.2
Veronica gracilis		0	0	3.1	2.1	1	2.1	3.1	1	2.1	0	1	0	3.1
Veronica plebeia		0	0	0	0	0	3.1	0	0	0	0	0	0	3.1
Viminaria juncea		0	0	0	1	1	0	0	0	2.1	3.1	0	0	3.1
Viola hederacea		2.1	0	0	2.1	3.1	3.1	0	0	0	1	0	0	3.1
Vittadinia cuneata var. cuneata	1	0	0	0	0	0	1	3.1	2.1	0	0	0	0	3.1
Vittadinia gracilis	1	0	0	2.1	0	0	1	3.1	2.1	0	0	0	0	3.1
Vittadinia muelleri		0	0	0	0	0	1	3.1	2.1	0	0	0	0	3.1
Wahlenbergia communis	1	0	0	0	0	0	2.1	3.1	2.1	0	0	0	0	3.1
Wahlenbergia gracilis	1	0	0	0	0	0	3.1	3.1	2.1	0	0	0	0	3.1
Wahlenbergia luteola	1	0	0	0	0	0	2.1	3.1	3.1	0	0	0	0	3.1
Wahlenbergia multicaulis	1	0	0	0	0	0	2.1	3.1	2.1	0	0	0	0	3.1
Wahlenbergia stricta ssp. stricta	1	0	0	0	0	1	3.1	1	0	0	0	0	0	3.1
Walwhalleya proluta	1	0	0	0	0	0	0	3.1	0	0	0	1	0	3.1
Wilsonia backhousei		1	3.1	1	0	0	0	0	0	0	0	0	0	3.1
Wilsonia humilis	1	0	3.1	0	0	0	0	0	0	0	0	0	0	3.1
Wilsonia rotundifolia		0	3.1	1	0	0	0	0	0	0	0	0	2.1	3.1
Wurmbea dioica ssp. dioica		1	0	1	1	3.1	3.1	2.1	2.1	2.1	1	0	0	3.1
Xerochrysum viscosum		0	0	0	0	1	3.1	1	1	0	0	0	0	3.1
Zostera muelleri ssp. capricorni		0	0	0	0	0	0	0	0	0	0	0	3.2	3.2

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