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Dear ██████████

Ecological due diligence assessment at 16-20 Dumbarton Street, Reservoir Matter 28840

Biosis was commissioned by City of Darebin to undertake an assessment of 16-20 Dumbarton, Street, Reservoir (the 'study area') to determine the ecological values of the land parcel. The study area includes the street frontage/nature strip, all of which falls on public land.

Objectives of the project

The tasks of the project are as follows:

- Provide an overview of ecological values present, including the presence, extent and condition of native vegetation and fauna habitat
- Advise if the site provides value for biodiversity in the local area
- Identify potential opportunities or constraints associated with preserving the site
- Advise if development of the site is likely to result in the requirement for biodiversity offsets
- Assess the project against relevant biodiversity legislation, including:
 - *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
 - *Flora and Fauna Guarantee Act 1988* (FFG Act)
 - *Planning and Environment Act 1987*
 - *Catchment and Land Protection Act 1994* (CaLP Act).

Vegetation and fauna habitat

A site assessment was undertaken on 7 November 2018. Approximately 1800 square metres of native vegetation is mapped in the southern half of the study area along with one scattered River Red-gum *Eucalyptus camaldulensis* recorded near the centre. The remainder of the site is comprised of introduced vegetation. A total of 10 native and 33 introduced flora species were identified within the study area.

The patch of native vegetation supports Plains Grassland which is an endangered ecological vegetation class within the Victorian Volcanic Plain bioregion. The patch is of relatively low species biodiversity but high cover

abundance such that it comprises the EPBC Act listed Natural Temperate Grassland of the Victorian Volcanic Plain ecological community. Key flora species in this area include Kangaroo Grass *Themeda triandra*, Common Tussock Grass *Poa labillardierei*, Common Wallaby-grass *Rytidosperma caespitosum*, Slender Bindweed *Convolvulus angustissimus* subsp. *angustissimus* and spear grasses *Austrostipa* spp. Inter-tussock space is high providing recruiting area for the grassland. This patch of Plains Grassland is also synonymous with the FFG Act listed Western (Basalt) Plains Grassland Community.

Introduced vegetation in some areas provides significant ground cover, however, on average there is a minimal amount across the site. Introduced vegetation includes Large-leaf Cotoneaster *Cotoneaster glaucophyllus*, Sweet Briar *Rosa rubiginosa*, Cocksfoot *Dactylis glomeratus*, Flatweed *Hypochaeris radicata*, Ribwort *Plantago lanceolata* and Prairie Grass *Bromus catharticus*. Three CaLP Act listed noxious weeds are present within the study area.

No fauna was observed during the assessment, however the entire study area supports suitable habitat for Golden Sun Moth *Synemon plana* and to a lesser extent Striped Legless Lizard *Delma impar*.

The study is also known to contain additional native species, including Slender Speedwell *Veronica gracilis*, Blue Devil *Eryngium ovinum*, Wattle Mat-rush *Lomandra filiformis* and Yellow Rush Lily *Tricoryne elatior*, however these were not observed during the current assessment.

A full list of flora recorded during the assessment is provided in Table 1.

Biodiversity Legislation and policy

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act applies to developments and associated activities that have the potential to significantly impact on Matters of National Environmental Significance (MNES) protected under the Act.

The study area supports habitat for EPBC Act listed Golden Sun Moth as well as Natural Temperate Grassland of the Victorian Volcanic Plain. Therefore any development within the land parcel would likely require a referral to the Department of Environment and Energy (DoEE).

Both the Natural Temperate Grassland of the Victorian Volcanic Plain as well as the extensive areas of introduced vegetation containing Chilean Needle-grass provide habitat for Golden Sun Moth. Golden Sun Moth can persist in small degraded patches of suitable habitat, therefore, the abundance of records to the north and north-west of the study area provide a reasonable indication that the species may be present within the study area.

While Striped Legless Lizard records are not present in the immediate vicinity of the study area it is still considered within the natural range of the species. The possible presence of Striped Legless Lizard is exacerbated by the availability of habitat within the easement that runs through the north end of the study area, providing greater opportunities for foraging and dispersal. While it remains unlikely, the presence of Striped Legless Lizard within the study area cannot be ruled out.

Flora and Fauna Guarantee Act 1988 (FFG Act)

The FFG Act is Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes. Under the FFG Act a permit is required from DELWP to 'take' protected flora species from public land.

All native vegetation within the study area is a component of the Western (Basalt) Plains Grassland Community therefore all native species, as constituents of this community, are protected. If any of them were to be impacted a protected flora permit would be required from the Department of Environment, Land, Water and Planning (DELWP). Areas of introduced vegetation are not protected under the FFG Act.

As discussed above, there is some suitable habitat for Golden Sun Moth

Planning and Environment Act 1987

The *Planning and Environment Act 1987* controls the planning and development of land in Victoria, and provides for the development of planning schemes for all municipalities.

Development of the study area would require a permit for the removal of native vegetation under Clause 52.17 of the Darebin Planning Scheme.

The removal of native vegetation within the study area would result in a general offset prescription.

Catchment and Land Protection Act 1994

The CaLP Act classifies certain species as noxious weeds or established invasive animals and provides a system of controls. Three noxious weeds were identified within the study area, including Artichoke Thistle *cynara cardunculus* subsp. *flavescens*, Chilean Needle-grass *Nassella neesiana* and Sweet Briar. A permit would be required to transport soil containing components of these weeds, including whole plants, seeds or propagules.

Opportunities

Due to the relatively small amount of native vegetation present as well as the high costs involved with setting up an offset site there is no opportunity to use the area as an offset site.

The northern portion of the study area could be developed and would only require a permit under Clause 52.17 for the removal of scattered occurrences of individual native flora species that are present there. If soil containing any of the noxious weeds was to be transported from the study area then a permit under the CaLP Act would also be required.

Recommendations

As the southern half of the study area supports native grassland that comprises federal and state threatened ecological communities it is recommended that this area be managed to encourage and promote biodiversity values within it.

Targeted surveys would confirm the presence/absence of threatened species and indicate whether the study area could benefit further from management.

Please contact me if you have any enquiries.

Yours sincerely




Consultant Botanist



Table 1 Flora species recorded during the assessment.

Status	Scientific Name	Common Name
Indigenous species		
	<i>Asperula conferta</i>	Common Woodruff
	<i>Austrostipa</i> spp.	Spear Grass
	<i>Convolvulus angustissimus</i> subsp. <i>Omnigracilis</i>	Slender Bindweed
	<i>Einadia nutans</i>	Nodding Saltbush
	<i>Eucalyptus camaldulensis</i>	River Red-gum
	<i>Poa labillardierei</i>	Common Tussock-grass
	<i>Rytidosperma caespitosum</i>	Common Wallaby-grass
	<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass
	<i>Rytidosperma</i> spp.	Wallaby Grass
	<i>Themeda triandra</i>	Kangaroo Grass
Introduced species		
	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
	<i>Avena barbata</i>	Bearded Oat
	<i>Avena fatua</i>	Wild Oat
	<i>Brassica fruticulosa</i>	Twiggy Turnip
	<i>Briza minor</i>	Lesser Quaking-grass
	<i>Bromus catharticus</i>	Prairie Grass
	<i>Bromus hordeaceus</i> subsp. <i>hordeaceus</i>	Soft Brome
	<i>Cenchrus clandestinus</i>	Kikuyu
	<i>Centaureum erythraea</i>	Common Centaury
	<i>Centaureum tenuiflorum</i>	Slender Centaury
	<i>Coprosma repens</i>	Mirror Bush
	<i>Cupressus</i> spp.	Cypress
RC	<i>Cynara cardunculus</i> subsp. <i>Flavescens</i>	Artichoke Thistle
	<i>Dactylis glomerata</i>	Cocksfoot
	<i>Helminthotheca echinoides</i>	Ox-tongue
	<i>Galium aparine</i>	Cleavers
	<i>Hypochaeris radicata</i>	Flatweed
	<i>Lolium perenne</i>	Perennial Rye-grass
	<i>Lolium rigidum</i>	Wimmera Rye-grass
RR	<i>Nassella neesiana</i>	Chilean Needle-grass
	<i>Paspalum dilatatum</i>	Paspalum
	<i>Phalaris aquatica</i>	Toowoomba Canary-grass
	<i>Plantago lanceolata</i>	Ribwort
	<i>Romulea rosea</i>	Onion Grass
RC	<i>Rosa rubiginosa</i>	Sweet Briar
	<i>Sonchus oleraceus</i>	Common Sow-thistle
	<i>Taraxacum officinale</i> spp. agg.	Garden Dandelion
	<i>Tragopogon porrifolius</i> subsp. <i>porrifolius</i>	Salsify
	<i>Trifolium campestre</i> var. <i>campestre</i>	Hop Clover

Status	Scientific Name	Common Name
	<i>Trifolium repens</i> var. <i>repens</i>	White Clover
	<i>Vicia sativa</i>	Common Vetch
	<i>Vulpia bromoides</i>	Squirrel-tail Fescue
	<i>Rumex crispus</i>	Curled Dock



Photo 1 Patch of native vegetation looking towards the north-eastern boundary



Photo 2 Scattered River Red-gum in the centre of the study area looking towards the road frontage



Photo 3 **Area of introduced vegetation at the front of the study area**