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2/08/2023
To: Luke Shuttleworth
Emu Beach Holiday Park
8 Medcalf Parade
Emu Point WA 6330

Dear Luke,

Please find details below regarding the flora and vegetation assessment undertaken by Southern Ecology on the 12th July 2023 at the Emu Beach Holiday Park. Associated spatial data for submission to the IBSA portal is appended to this letter.

A site visit on 12th of July 2023 was undertaken and a brief flora and vegetation assessment was conducted in accordance EPA guidance (EPA 2016). A small parcel of remnant vegetation (i.e., the 'survey area', approximately 1600m^2) was assessed, which includes a proposed clearing area (501m^2). The clearing area was demarcated by flagging tape and or survey pegs. The assessment determined the following outcomes:

- One native remnant vegetation type is present (Peppermint Low Forest), varying in condition from Completely Degraded to Very Good (Table 1, Figure 1, Plates 1 and 2).
- Vegetation condition is reduced at the site due to heavy infestation of weeds and evidence of past clearing and soil disturbance (> 20 years).
- Vegetation in Very Good condition contains a dense understory of *Lepidosperma gladiatum*, which is proposed to be retained.
- Peppermint Low Forest is the Albany Regional Vegetation Survey Unit 2 (Sandiford and Barrett 2010). It is locally common in coastal areas with 1,232 ha mapped, including 23% in IUCN reserves in the Albany Region (i.e., 30 km radius). It is not concordant with any currently listed Priority or Threatened Ecological Communities listed under state or commonwealth Acts.
- A total of 30 taxa were recorded from 24 families in the survey area including 12 weed species (Table 2).
- No 'Threatened' flora protected under the Biodiversity Conservation Act 2016 (BC Act) or the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) were recorded. No Priority-listed flora with the Department of Biodiversity, Conservation and Attractions (DBCA) were recorded.
- No existing records of conservation significant flora occur with 500 m of the survey area and the habitat is not considered suitable (due to level of weeds and past soils disturbance) to support any known annually flowering conservation significant taxon that may have not been flowering at the time of the suvey (i.e., *Caladenia harringtoniae* (T)).
- **Asparagus asparagoide*s, a Weed of National Significance (WoNS) occurs in the survey area.
- Several other weeds are present that are not nationally significant, however are locally problematic and highly abundant within the survey area/clearing area.
- The survey effort and timing are considered adequate given the small area and degraded vegetation condition. No additional spring field visit is deemed necessary.

Table 1. Proportion of Peppermint Low Forest in condition categories (EPA 2016) proposed to be retained or cleared within the survey area.

Condition Rating of Peppermint Low Forest	Retained	Proposed Clearing Area	Total
Very Good	261		261
Degraded	296	501	797
Completely Degraded (i.e., Parkland Cleared)	560		560
			1618

Table 2. Vascular plant taxa recorded in the survey area. Nomenclature and status according to WAH (1998-), DotEE (2017b) and DPIRD (2018). *Denotes weed taxon. WoNS = Weed of National Significance.

Family	Taxon	Status	Weed	Comment
Agapanthaceae	*Agapanthus praecox*	*WoNS*	*	
Apiaceae	*Daucus glochidiatus*			
Apocynaceae	*Vinca major*		*	
Asparagaceae	*Asparagus asparagoides*		*	
Asteraceae	*Senecio angulatus*		*	
Asteraceae	*Sonchus oleraceus*		*	
Brassicaceae	*Cardamine hirsuta*		*	
Chenopodiaceae	*Rhagodia baccata*			
Chenopodiaceae	*Rhagodia crassifolia*			
Crassulaceae	*Crassula spathulata*			
Cyperaceae	*Ficinia nodosa*			
Cyperaceae	*Lepidosperma angustatum*			narrow form
Cyperaceae	*Lepidosperma gladiatum*			
Dilleniaceae	*Hibbertia cuneiformis*			
Ericaceae	*Leucopogon parviflorus*			
Euphorbiaceae	*Homalanthus populifolius*		*	
Fabaceae	*Acacia littorea*			
Fabaceae	*Hardenbergia comptoniana*			
Geraniaceae	*Pelargonium capitatum*		*	
Moraceae	*Morus nigrus*		*	
Myrtaceae	*Agonis flexuosa*			
Orchidaceae	*Caladenia flava*			
Orchidaceae	*Cyrtostylis huegelii*			
Oxalidaceae	*Oxalis perennans*			
Poaceae	*Stenotaphrum secundatum*		*	
Polygalaceae	*Polygala myrtifolia*		*	
Ranunculaceae	*Clematis pubescens*			
Restionaceae	*Desmocladus flexuosus*			
Rhamnaceae	*Spyridium globulosum*			
Rubiaceae	*Galium murale*		*	

Plate 1. Proposed clearing envelope. Degraded due to understory invaded by **Senecio angulatus* and **Vinca major*. Proposed 'parkland' clearing will retain large peppermints shown.

Plate 2. Proposed vegetation to be retained. Peppermint Low Forest in Very Good condition.

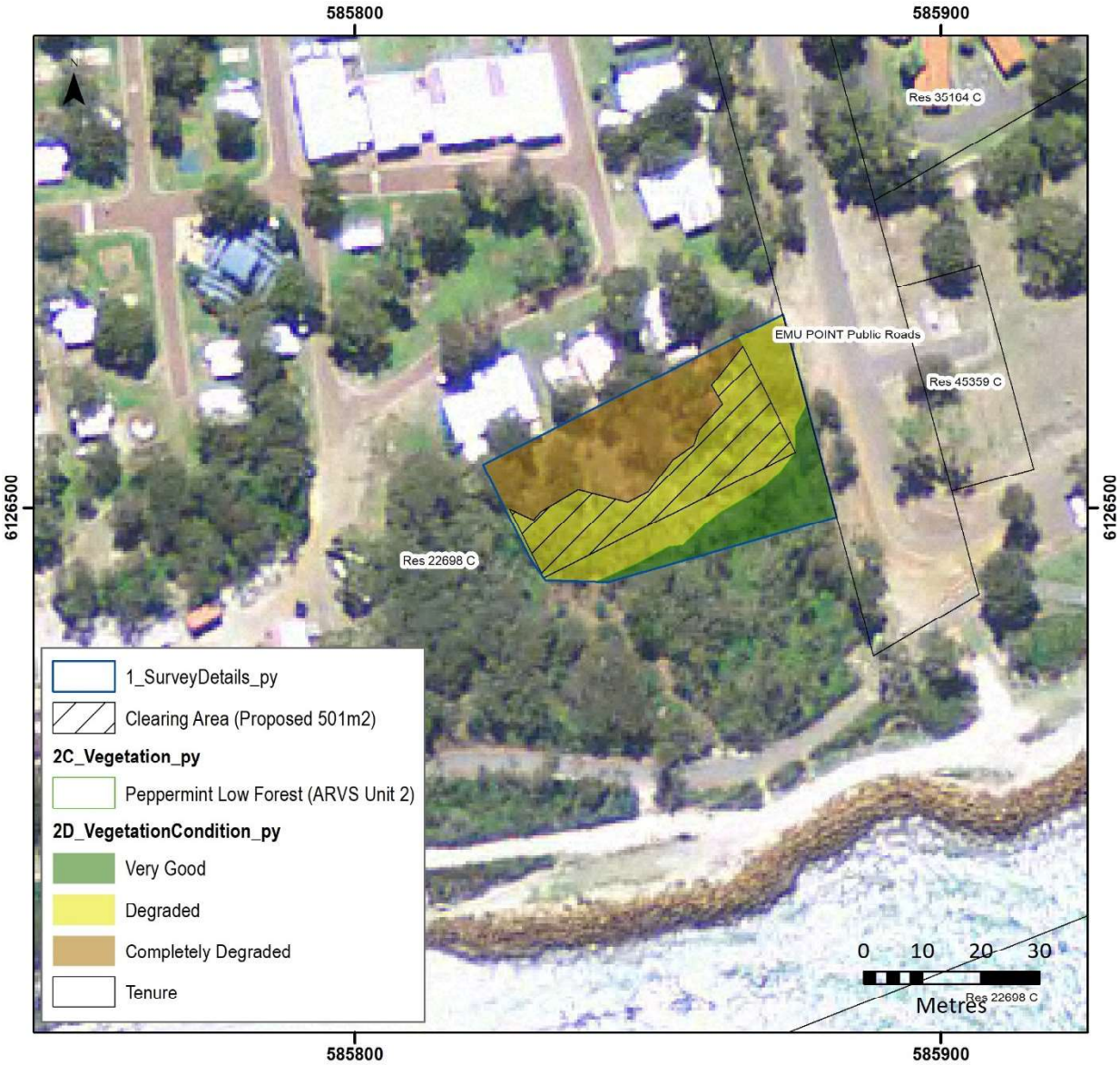

Figure 1. Vegetation type and condition within the survey area and the proposed clearing envelope.