

MEMORANDUM

Attention:	H.O. Yelverton	From:	Kirsi Kauhanen
Company:	Cowara Contractors Pty Ltd	Date:	23 June 2020
Subject:	Environmental Site Inspections	Project:	Lot 230 Elgin Road, Elgin

1. INTRODUCTION

Cowara Contractors Pty Ltd (Cowara) is proposing to extract sand on Lot 230 (on Plan 232802) Elgin Road in Elgin, approximately 20 km south of Bunbury (Figure 1). The project envelope contains remnant native vegetation. MBS Environmental was engaged to undertake a site inspection to describe the existing vegetation and other key environmental features and identify the need for further surveys. The findings of the site inspections will be used to inform project approval applications.

2. METHODS

Senior Environmental Scientist Kirsi Kauhanen visited the project envelope on 11 May 2020 and 17 June 2020. As the site was too degraded a Reconnaissance Flora Survey was not undertaken, but the vegetation was described by traversing the area on foot.

3. RESULTS

The project envelope is located on a low, east-west aligned, sandy hill that is surrounded by lower lying cleared pasture (Figure 2). Lot 230 and the surrounding properties are currently used for cattle grazing. Along the eastern property boundary the sand hill is cut by a deep (2-4 m from ground surface), north-south aligned open drain that connects to Gynudup Brook approximately 1.7 km north-east from the project site.

The majority of the vegetation within the project envelope comprised open woodland of *Eucalyptus marginata*, *Banksia attenuata*, *Banksia ilicifolia*, *Xylomelum occidentale* and *Nuytsia floribunda* over patches of *Kunzea glabrescens* over bare ground and weeds (Figure 2, Plate 1, Plate 2). In the lower lying areas in the southern part, there were isolated *Corymbia calophylla* and *Agonis flexuosa* over pasture (Plate 3). The proposed drain crossing area contained regrowth *Kunzea* spp., *Acacia saligna*, *Melaleuca* spp. and *Astartea* sp. over weeds (Plate 4). Vegetation in the road reserve was outside the scope of the inspection. There was a small area of *Melaleuca preissiana* with emergent *Corymbia calophylla* over *Kunzea glabrescens* immediately to the north-northeast of the project envelope, outside the currently proposed project area.

The condition of the vegetation within the project envelope was Completely Degraded; no longer intact, completely/almost completely without native species (following scale by Keighery, 1994). The project envelope showed signs of multiple historical disturbances including selective logging, clearing for pasture, draining, grazing and fire. Native understorey had been lost and replaced by introduced weed species, and upper storey density was low. Much of the native vegetation that remained was either dead or in poor health, likely due to dieback but also potentially due to water stress as the deep drain would have resulted in reduction in groundwater levels. The occurrence of dieback (*Phytophthora cinnamomi*) was suspected due to gradual deaths of susceptible species (e.g. *Banksia* spp. and Jarrah).

Due to the Completely Degraded condition of the vegetation within the project envelope, it was not considered representative of the original vegetation community of the area. As such, the vegetation would not be representative of any state or federally listed Threatened or Priority Ecological Communities (TEC or PEC) with the potential to occur in the area (e.g. Banksia Woodlands of the Swan Coastal Plain TEC and PEC).

A list of flora species recorded in the project envelope during the site inspections is provided in Table 1. No significant flora species listed under the *Biodiversity Conservation Act 2016*, *Environment Protection and Biodiversity Conservation Act 1999* or Department of Biodiversity, Conservation and Attractions Priority list were recorded. Considering the degraded nature of the site and the lack of native understorey, the occurrence of any significant flora was considered low. None of the introduced species recorded are listed as declared pests under the *Biosecurity and Agricultural Management Act 2007* or as a weed of national significance.

The remnant native vegetation was considered to have potential to provide suitable habitat for threatened black cockatoo species (Baudin's black cockatoo *Calyptorhynchus baudinii*, Carnaby's black cockatoo *Calyptorhynchus latirostris* and the forest red-tailed black cockatoo *Calyptorhynchus banksii naso*) and western ringtail possum (*Pseudocheirus occidentalis*) that are protected under both state and federal legislation. A separate targeted survey for these species has subsequently been undertaken. Due to the lack of native understorey and poor canopy connectivity, the fauna habitat values of the site were generally considered poor and fauna diversity was expected to be low. Due to the mostly cleared nature of the surrounds and the deep drain on the eastern side, the habitat within project envelope has limited connectivity.

The areas surrounding the sandhill have been mapped as a multiple-use palusplain wetland (ID 15809; totalling over 42,000 ha in size) and a smaller multiple-use sumpland (ID 1309; 7.47 ha). Both wetlands have been mostly cleared of native vegetation in the vicinity of the proposed clearing area and are used for grazing, in line with their rural zoning. No wetland-type vegetation was recorded within the proposed clearing area. The hydrology of the area has been significantly modified by the deep drain along the eastern side of the property that continues to maintain lower than natural surface and ground water levels in the area and the natural functioning of any wetlands has long ceased.

There were no signs of substantial erosion or other land degradation within the project envelope. The banks of the drain showed signs of gradual erosion in some parts as would be expected from a historically cleared agricultural area currently used for grazing cattle.


4. DISCUSSION AND CONCLUSIONS

Overall, the site inspections found that the project envelope supports low biodiversity and has been significantly degraded over time by a range of disturbances. The remaining native vegetation is Completely Degraded and as such is no longer representative of the original vegetation community. The main remaining environmental value of the site is as potential fauna habitat for threatened black cockatoos and western ringtail possum which will be investigated further.

The site inspections were undertaken in late autumn – early winter that is not an optimal period for observing flora in the southwest. However, considering the vegetation condition was found to be Completely Degraded and there was a lack of native understorey, formal flora survey work during spring is not warranted.

As the remnant vegetation appears dieback infected and the occurrence of dieback cannot be ruled out in the cleared areas, the entire project area should be managed as potentially dieback infected.

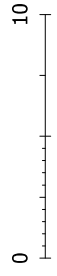
Yours sincerely
MBS Environmental



Kirsi Kauhanen
Senior Environmental Scientist



Scale: 1:300000
 Original Size: A4
 Grid: MGA94(50)

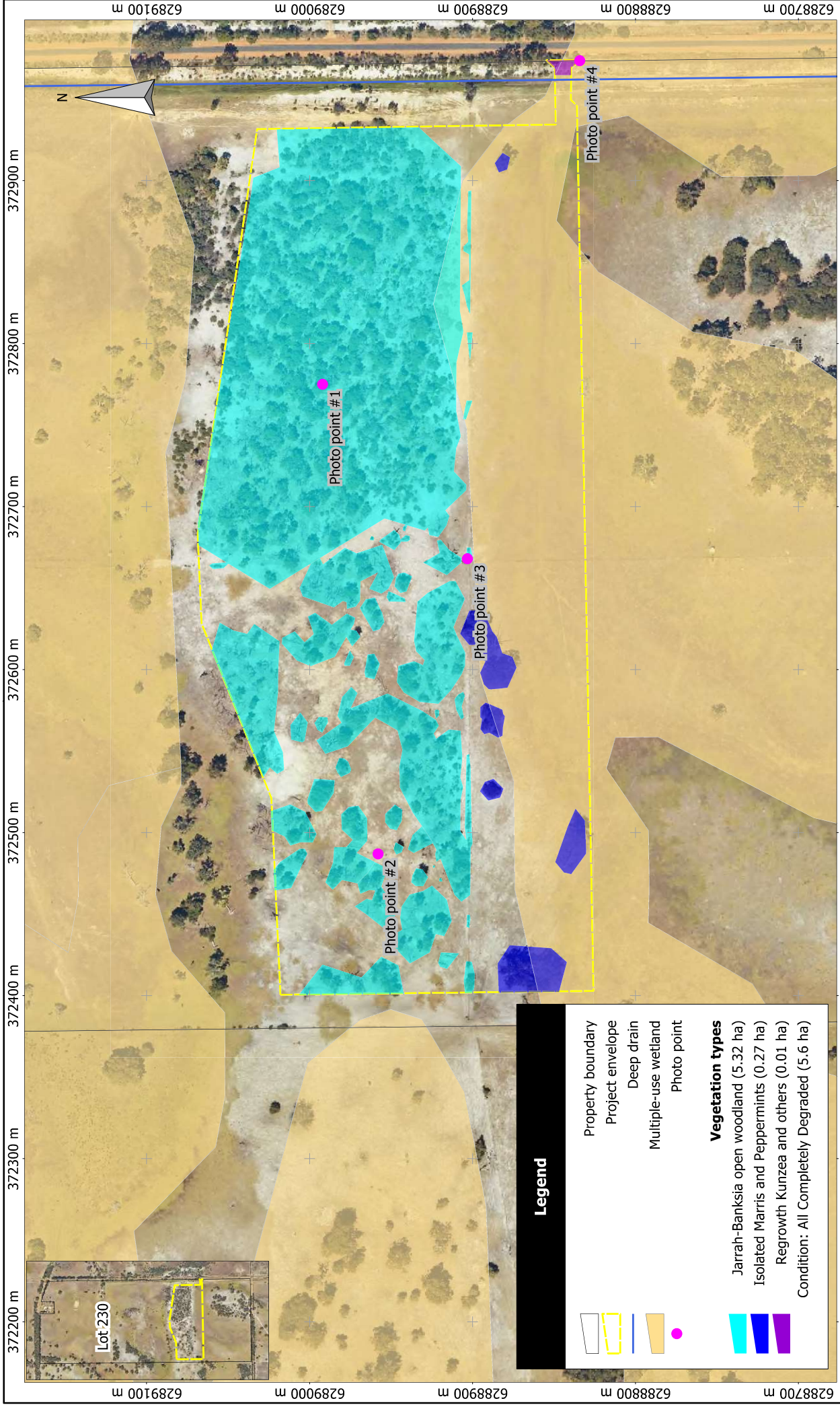


Cowara Contractors Pty Ltd
 Lot 230 Elgin Road, Elgin

Figure 1
 Project Location

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Legend

- Property boundary
- Project envelope
- Deep drain
- Multiple-use wetland
- Photo point

Vegetation types

- Jarrah-Banksia open woodland (5.32 ha)
- Isolated Marris and Peppermints (0.27 ha)
- Regrowth Kunzea and others (0.01 ha)
- Condition: All Completely Degraded (5.6 ha)

Scale: 1:3000
 Original Size: A4
 Air Photo Date: March 2018
 Grid: Australia MGA94 (50)

Figure 2
Site Inspection Records

Cowara Contractors
 Lot 230 Elgin Road, Elgin
 Environmental Site Inspection

F:\Kris\PROJECTS\Cowara\GIS\Clearing Permit\Lot 230 Elgin Rd Site Inspection.map 21/06/2020 F2 Site Inspection Records A4L

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Table 1: Flora Taxa Recorded within Proposed Project Envelope During Site Inspections

Family	Taxa
Asteraceae	* <i>Arctotheca calendula</i>
	* <i>Cotula turbinata</i>
	* <i>Hypochaeris glabra</i>
	* <i>Ursinia anthemoides</i>
Loranthaceae	<i>Nuytsia floribunda</i>
Myrtaceae	<i>Corymbia calophylla</i>
	<i>Eucalyptus marginata</i>
	<i>Kunzea glabrescens</i>
Phytolaccaceae	* <i>Phytolacca octandra</i>
Poaceae	* Several annual introduced grass species (too young to identify)
Proteaceae	<i>Banksia attenuata</i>
	<i>Banksia ilicifolia</i>
	<i>Xylomelum occidentale</i>

Additionally, the proposed drain crossing included regrowth *Kunzea* spp., *Acacia saligna*, *Melaleuca* spp. and *Astartea* sp. over weeds.



Plate 1: Photo Point #1 – View East



Plate 2: Photo Point #2 – View West



Plate 3: Photo Point #3 – View Southwest



Plate 4: Photo Point #4 – View Northwest into Proposed Drain Crossing