

## Native vegetation clearing referral - Site Inspection Report Oldfield Crossing Upgrade

Report by -  
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## 1 Introduction

The Oldfield River Crossing on Oldfield Road requires upgrading. 452m<sup>2</sup> of vegetation is proposed to be cleared for the purpose of floodway reconstruction. The proposed works are located 130 km north west of Esperance, within the Shire of Esperance managed road reserve of Oldfield Road. This is located within the Oldfield road reserve along Oldfield road between SLK 7.78 and 7.9 (Main Roads, 2022). This site is to be assessed under the Shire of Esperance's Minor Infrastructure Project (MIP) Clearing Permit CPS 7548/2.

The Oldfield Road floodway is particularly narrow resulting in safety issues during vehicle passing on both directions. The Old Field Road Floodway requires widening to maintain the safety of road users. This road is classified as a rural access road on Shire road network providing vital link to properties and other access roads in north west region of Esperance. Traffic counts showing a significant impact of heavy vehicle occupied during harvesting season and it is an approved RAV route.

To complete these works, native vegetation up to 2m from the current road footprint on both sides of the road is required to be cleared, increasing the active road footprint to 17m. This requires clearing of 452m<sup>2</sup> of native vegetation. To mitigate impact of clearing vegetation, where feasible clearing will not occur to the full permitted width, conserving vegetation.

## 2 Map



**Figure 1.** Location of vegetation to be cleared of proposed Oldfield Crossing Upgrade in red. (A point within the site is 6286816.65m N, 309984.37m E (UTM Zone 51 H, GDA94).)

### 3 Desktop survey

Prior to the site inspection the site was run through the Shire of Esperance's Desktop Environmental Impacts Spatial Interrogation Program. This program interrogates a number of Local, State and Federal spatial data sets to assess against DWER's Ten Clearing Principles. In addition, the EPBC Act Protected Matters Search Tool, was also checked to identify the possible occurrence of threatened and priority flora, fauna and threatened and priority ecological communities within the Oldfield Crossing Upgrade area. Search parameters were 'by polygon' and a 20 km buffer was applied to the search area; standard used in this IBRA subregion.

The site sits within the mapped within the Recherche subregion of the Esperance Plains IBRA region, although it close, (0.5km) to the Eastern Mallee subregion of the Mallee IBRA region, and it more appropriately fits in that region.

The Beard Vegetation Association, Esperance 516, described as: "Shrublands; mallee scrub, black marlock" is mapped as occurring at this site. This is appropriate given the scale of Beard vegetation mapping. 54.79% of this vegetation association remains, 44.91% of this vegetation association within the Shire of Esperance, 68.95% within the Esperance Plains IBRA region and 39.21% within the Mallee IBRA region.

Threatened and priority flora within a 20 km radius was identified prior to conducting the site inspection. (Appendix 1). Scans of pressed herbarium specimens, photos and keys were taken into the field to ensure appropriate specimens were collected.

To assess fauna, the following databases were searched with a 20km buffer from the center of the site; Department of Biodiversity, Conservation and Attractions (DBCAs) and Western Australian Museum (WAM) NatureMap data portal. During the site inspection direct observations as well as observations on the suitability of habitat for listed species was undertaken.

### 4 Site Inspection

A site inspection was conducted by Julie Waters and Katherine Walkerden, Shire of Esperance's Environmental Coordinator and Officer, on 28/9/2022.

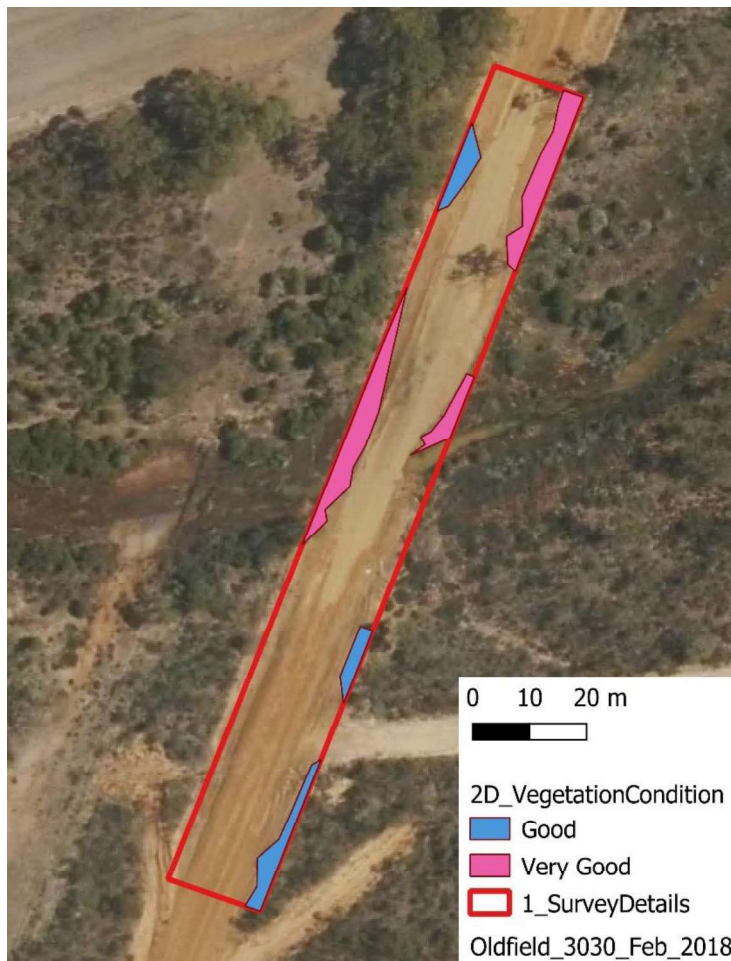
The site was at the bottom of valley of a tributary to the Oldfield River which feeds into Stokes Inlet. The soil at the site was red/brown loam over granite and there was some exposed granite at part of the site. This matched the desktop description of soils; "Grey shallow sandy duplex soils with associated deep grey sandy duplex soils and other minor soils" and geology; "Tertiary sediments with colluvium and alluvium deposits. Patches of granitic rock".

Flora species present formed two distinct vegetation types,

- A. Mixed Mallee woodland over *Melaleuca*
- B. *Melaleuca brevifolia* dominated watercourse fringing vegetation with mixed samphires and *Disphyma crassifolium*.

Vegetation Condition varied between a very good and good condition (Keighery 1994), with heavy weed invasion seen at parts of the site. The site was also impacted upon by secondary salinity, with a number of large trees that had been killed by salt. Groundwater salinity

level according to the desktop survey is: 14000-35000 mg/L, dead trees impacted upon salinity within the creekline were evident at the site (Figure 4).



**Figure 2.** Vegetation Condition within proposed Oldfield Crossing Upgrade.

The desktop survey mapped the Endangered EPBC listed “Proteaceae dominated kwongan shrublands of the southeast coastal floristic province of Western Australia” Threatened Ecological community at the site. This TEC was not at the site, and the site only contained a single proteaceous species. No other state or federally TECs or PECs were present at the site.

The desktop survey identified 11 conservation listed fauna species as likely to occur, after examination of their habitat requirements to the site only 2 species were deemed a possibility to occur, these were the Malleefowl and Chuditch. Given the very small size of the proposed clearing and the fact that the road already exists in the area, any impacts to these or other fauna species is likely to be negligible.

A total of 30 native flora species were found and additional 12 non-native flora species were identified during the survey. No threatened or priority flora were identified. One weed range extension was sent off to WA Herbarium KSW21522 Acc 9874, identified by Shire of Esperance as *Hainardia cylindrica*. Some of the samphires were not well preserved and unable to be identified beyond genus level. The Alyogyne specimen was either “sp Southern Coast” or “sp Hutt River”, however due to the features contained within the specimen, a positive identification could not be ascertained. Neither of these species are on priority list.

**Table 1.** Incidental list of flora species present within proposed Oldfield Crossing Upgrade.

Family	Genus	Species	Invasive
Aizoaceae	<i>Disphyma</i>	<i>crassifolium</i>	
Asphodelaceae	<i>Asphodelus</i>	<i>fistulosus</i>	*
Asteraceae	<i>Arctotheca</i>	<i>calendula</i>	
Asteraceae	<i>Brachyscome</i>	<i>iberidifolia</i>	
Asteraceae	<i>Gazania</i>	<i>linearis</i>	*
Asteraceae	<i>Hypochaeris</i>	<i>glabra</i>	*
Asteraceae	<i>Sonchus</i>	<i>oleraceus</i>	*
Asteraceae	<i>Ursinia</i>	<i>anthemoides</i>	
Brassicaceae	<i>Brassica</i>	<i>napus</i>	*
Chenopodiaceae	<i>Enchylaena</i>	<i>tomentosa</i>	
Chenopodiaceae	<i>Rhagodia</i>	<i>preissii</i> ssp, <i>preissii</i>	
Chenopodiaceae	<i>Salicornia</i>	<i>quinqueflora</i>	
Chenopodiaceae	<i>Tecticornia</i>	<i>lepidosperma</i>	
Chenopodiaceae	<i>Tecticornia</i>	<i>pergranulata</i> ssp, <i>pergranulata</i>	
Chenopodiaceae	<i>Tecticornia</i>	sp.	
Chenopodiaceae	<i>Tecticornia</i>	sp.	
Cyperaceae	<i>Lepidosperma</i>	sp.	
Fabaceae	<i>Acacia</i>	<i>saligna</i>	
Fabaceae	<i>Acacia</i>	<i>sulcata</i> var <i>platyphylla</i>	
Fabaceae	<i>Senna</i>	<i>artemisioides</i> ssp. <i>filifolia</i>	
Fabaceae	<i>Vicia</i>	sp.	*
Geraniaceae	<i>Erodium</i>	<i>crinitum</i>	*
Malvaceae	<i>Alyogyne</i>	Sp. Southern Coast or sp. Hutt River	
Myrtaceae	<i>Eucalyptus</i>	<i>occidentalis</i>	
Myrtaceae	<i>Eucalyptus</i>	<i>phenax</i>	
Myrtaceae	<i>Eucalyptus</i>	<i>quadrans</i>	
Myrtaceae	<i>Eucalyptus</i>	<i>suggrandis</i> ssp. <i>suggrandis</i>	
Myrtaceae	<i>Melaleuca</i>	<i>acuminata</i> ssp. <i>acuminata</i>	
Myrtaceae	<i>Melaleuca</i>	<i>brevifolia</i>	
Myrtaceae	<i>Melaleuca</i>	<i>hamata</i>	
Pittosporaceae	<i>Billardiera</i>	<i>lehmanniana</i>	
Poaceae	<i>Austrostipa</i>	<i>elegantissima</i>	
Poaceae	<i>Avena</i>	<i>fatua</i>	
Poaceae	<i>Eragrostis</i>	<i>curvula</i>	*
Poaceae	<i>Hainardia</i>	<i>cylindrica</i> KSW21522 Acc 9874	*
Poaceae	<i>Lolium</i>	Sp.	*
Poaceae	<i>Lolium</i>	<i>x hybridum</i>	*
Polygalaceae	<i>Comesperma</i>	<i>integerrimum</i>	
Primulaceae	<i>Lysimachia</i>	<i>arvensis</i>	*
Proteaceae	<i>Hakea</i>	<i>nitida</i>	
Santalaceae	<i>Santalum</i>	<i>acuminatum</i>	
Solanaceae	<i>Solanum</i>	<i>hoplopetalum</i>	

## 5 Photos



**Figure 3.** Photo showing poor condition of the Oldfield Road floodway. Photo taken by Katherine Walkerden on the 28/9/2022.



**Figure 4.** Photo showing vegetation Type A: Mixed Mallee woodland over Melaleucas. Photo taken by Katherine Walkerden on the 28/9/2022.



**Figure 5.** Photo showing vegetation Type B: *Melaleuca brevifolia* dominated watercourse fringing vegetation with mixed samphires and *Disphyma crassifolium*. Photo taken by Katherine Walkerden on the 28/9/2022.



**Figure 6.** Photo showing dead trees impacted upon by rising salinity along the Oldfield River. Photo taken by Katherine Walkerden on the 28/9/2022.



## Appendix 1: Threatened and Priority flora species identified within 20km

Data provided by Department of Biodiversity, Conservation and Attractions (DBCA) and Western Australian Herbarium was used to assess threatened flora (TF), priority flora (PF), and threatened (TEC) and priority (PEC) ecological communities within 20 km radius of the site. Specifically, spatial data included;

- WAHerb extract (DBCA, June 2022).
- Threatened and Priority Reporting (TPFL) (DBCA, June 2022).
- Esperance District Threatened Flora (DBCA, March 2022).

Taxon	Status	Distance from site (km)
<i>Lepidosperma</i> sp. Mt Chester (S. Kern et al. LCH 16596)	P1	13.64
<i>Leucopogon</i> sp. Cascades (M. Hislop 3693)	P1	14.55
<i>Melaleuca similis</i>	P1	11481.75519
<i>Scaevola archeriana</i>	P1	15288.08325
<i>Stenanthera localis</i>	P1	13168.51241
<i>Synaphea</i> sp. Jilakin Flat Rocks Rd (R. Butcher et. al RB200)	P1	12541.27119
<i>Amanita inculta</i>	P2	15849.20049
<i>Persoonia brevirhachis</i>	P2	15120.42515
<i>Stenanthera lacsalaria</i>	P2	13495.38751
<i>Austrobaecka uncinella</i>	P3	17258.99795
<i>Boronia oxyantha</i> var <i>brevicalyx</i>	P3	16047.58005
<i>Bossiaea flexuosa</i>	P3	14933.52423
<i>Commersonia rotundifolia</i>	P3	16862.75977
<i>Dampiera</i> sp. Ravensthorpe (G.F. Craig 8277)	P3	15295.14831
<i>Daviesia pauciflora</i>	P3	11713.28244
<i>Eremophila chamaephila</i>	P3	18345.11245
<i>Goodenia laevis</i> subsp. <i>laevis</i>	P3	13405.35082
<i>Persoonia cymbifolia</i>	P3	15198.67469
<i>Thomasia pygmaea</i>	P3	18840.79769
<i>Allocasuarina hystriosa</i>	P4	19159.84705
<i>Caladenia arrecta</i>	P4	19629.73237
<i>Eucalyptus stoatei</i>	P4	11372.77792
<i>Grevillea fastigiata</i>	P4	19898.43423
<i>Lepidium pseudotasmanicum</i>	P4	13364.2145
<i>Pultenaea calycina</i> subsp. <i>proxena</i>	P4	3711.951041
<i>Conostylis lepidospermoides</i>	T	11475.61541
<i>Lepidosperma</i> sp. Mt Chester (S. Kern et al. LCH 16596)	P1	13635.01761

## Appendix 2: Threatened fauna species identified within 20km

To assess fauna, the following databases were searched with a 20km buffer from the center of the site;

- Department of Biodiversity, Conservation and Attractions (DBCA) and Western Australian Museum (WAM) NatureMap data portal

Taxon	Common name	Conservation code	Likelihood of occurrence based on habitat
<i>Calyptorhynchus latirostris</i>	Carnaby's cockatoo	EN	Unlikely as outside mapped foraging range
<i>Thinornis rubricollis</i>	Hooded plover, hooded dotterel	P4	Unlikely
<i>Leipoa ocellata</i>	Malleefowl	VU	Possible
<i>Isodon fusciventer</i>	Quenda, southwestern brown bandicoot	P4	Unlikely
<i>Tringa nebularia</i>	Common greenshank	MI	Possible
<i>Calyptorhynchus baudinii</i>	Baudin's cockatoo	EN	Unlikely as outside mapped foraging range
<i>Calidris ferruginea</i>	Curlew Sandpiper	CR	Unlikely
<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew	CR	Unlikely, coastal species
<i>Botaurus poiciloptilus</i>	Australasian Bittern	EN	Unlikely – inhabits freshwater swamps with reeds/sedges
<i>Pezoporus occidentalis</i>	Night Parrot	EN	Unlikely
<i>Dasyurus geoffroii</i>	Chuditch, Western Quoll	VU	Possible

## Appendix 3: Traffic Count Data for site

### MetroCount Traffic Executive

#### Daily Classes

#### DailyClass-180 -- English (ENA)

##### Datasets:

**Site:** [604\_000049\_000200] Oldfield Road South of River Road  
**Attribute:** RURAL  
**Direction:** 7 - North bound A>B, South bound B>A. **Lane:** 2  
**Survey Duration:** 0:00 Saturday, 18 October 2014 => 10:09 Monday, 15 December 2014,  
**Zone:**  
**File:** 604\_000049\_000200 0 2014-12-17 1111.EC2 (Plus )  
**Identifier:** 2462F7D6 MC56-6 [MC55] (c)Microcom 02/03/01  
**Algorithm:** Factory default axle (v5.02)  
**Data type:** Axle sensors - Paired (Class/Speed/Count)

##### Profile:

**Filter time:** 0:00 Saturday, 18 October 2014 => 10:09 Monday, 15 December 2014  
(58.4234)  
**Included classes:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12  
**Speed range:** 10 - 160 km/h.  
**Direction:** North, East, South, West (bound), P = North, Lane = 0-16  
**Separation:** Headway > 0 sec, Span 0 - 100 metre  
**Name:** Default Profile  
**Scheme:** Vehicle classification (AustRoads94)  
**Units:** Metric (metre, kilometre, m/s, km/h, kg, tonne)  
**In profile:** Vehicles = 1563 / 1606 (97.32%)

## Daily Classes

### DailyClass-180

**Site:** 604\_000049\_000200.2.3NS  
**Description:** Oldfield Road South of River Road  
**Filter time:** 0:00 Saturday, 18 October 2014 => 10:09 Monday, 15 December 2014  
**Scheme:** Vehicle classification (AustRoads94)  
**Filter:** Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Monday, 27 October 2014

	1	2	3	4	5	6	7	8	9	10	11	12
<b>Total</b>												
<b>Mon</b> 67	35	3	5	0	0	0	0	0	0	0	23	1
(%)	52.2	4.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.3	1.5
<b>Tue</b> 59	21	2	12	0	1	3	0	0	0	0	17	3
(%)	35.6	3.4	20.3	0.0	1.7	5.1	0.0	0.0	0.0	0.0	28.8	5.1
<b>Wed</b> 58	31	0	11	0	0	1	0	0	1	0	12	2
(%)	53.4	0.0	19.0	0.0	0.0	1.7	0.0	0.0	1.7	0.0	20.7	3.4
<b>Thu</b> 43	16	0	8	0	0	0	0	0	2	0	17	0
(%)	37.2	0.0	18.6	0.0	0.0	0.0	0.0	0.0	4.7	0.0	39.5	0.0
<b>Fri</b> 33	18	2	4	0	0	1	1	0	0	0	7	0
(%)	54.5	6.1	12.1	0.0	0.0	3.0	3.0	0.0	0.0	0.0	21.2	0.0
<b>Sat</b> 92	53	0	5	0	0	1	0	1	0	0	29	3
(%)	57.6	0.0	5.4	0.0	0.0	1.1	0.0	1.1	0.0	0.0	31.5	3.3
<b>Sun</b> 84	56	3	4	0	0	3	0	1	0	0	17	0
(%)	66.7	3.6	4.8	0.0	0.0	3.6	0.0	1.2	0.0	0.0	20.2	0.0

### Average daily volume

<b>Entire week</b>	33	1	7	0	0	1	0	0	0	0	17	1
62												
(%)	52.8	2.3	11.2	0.0	0.2	2.1	0.2	0.5	0.7	0.0	28.0	2.1
<b>Weekdays</b>	24	1	8	0	0	1	0	0	1	0	15	1
52												
(%)	46.5	2.7	15.4	0.0	0.4	1.9	0.4	0.0	1.2	0.0	29.2	2.3
<b>Weekend</b>	55	2	5	0	0	2	0	1	0	0	23	2
88												
(%)	61.9	1.7	5.1	0.0	0.0	2.3	0.0	1.1	0.0	0.0	26.1	1.7

\* - Incomplete