

Native Vegetation Clearing Referral Merivale Road, SLK 7.32 - 7.93

Site Inspection Report

Prepared by

[redacted] – BSc, MEnvSc

Environmental Officer

Shire of Esperance

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Revision History

Date	Version	CM Reference	Reason for Change	Next Review
24/9/2025	1		Reviewed by Environmental Coordinator	N/A

Introduction

The Shire of Esperance (SOE) has proposed to clear 0.12ha of native vegetation located within the Merivale Road reserve between SLK 7.32 and 7.93 (Main Roads, 2025) for the purposes of road upgrades to meet Australian road standards.

Map

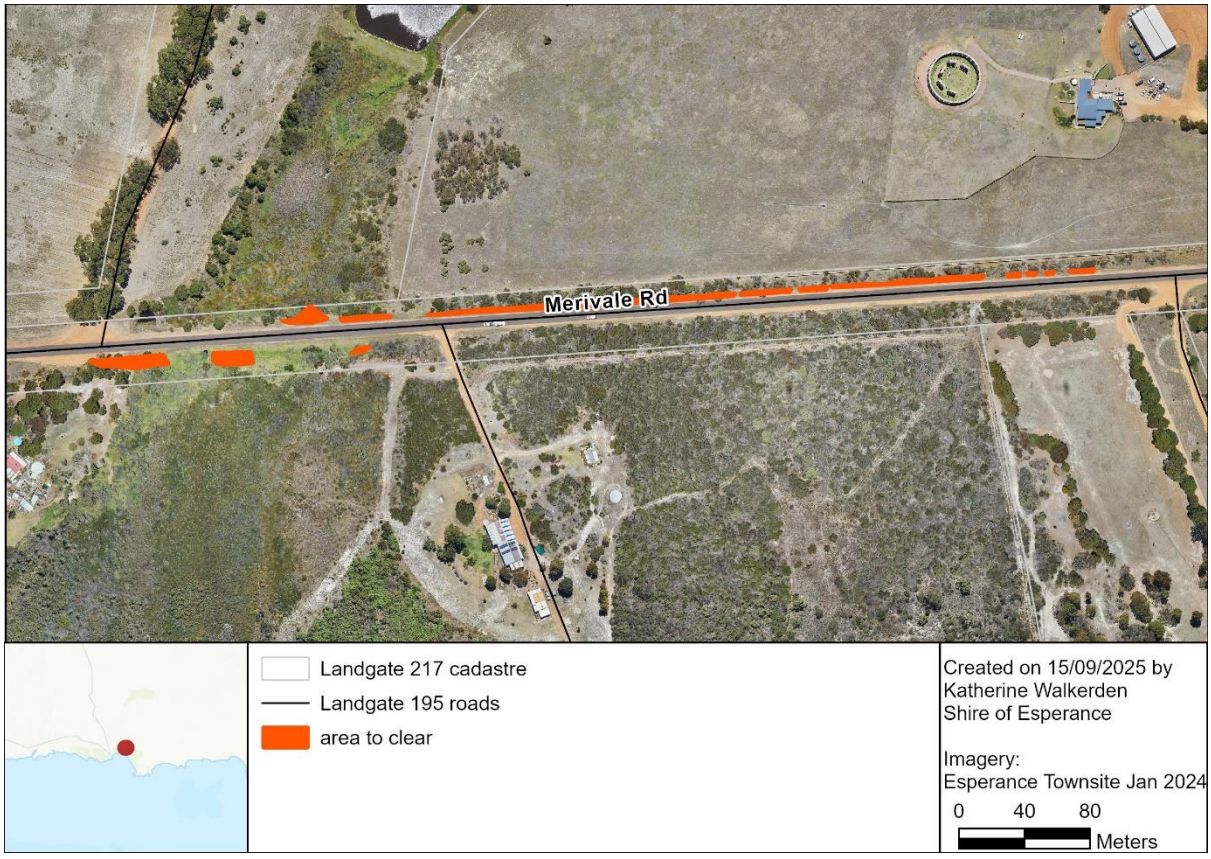


Figure 1. Location and vegetation to be cleared of proposed Merivale Road, SLK 7.32-7.93. (A point within the site is 409768m E, 6260797m N, GDA94, Zone 51).

Desktop Summary

Prior to the site inspection, the Shire of Esperance's Desktop Environmental Impacts Spatial Interrogation Program (DEISIP) was utilised to conduct a comprehensive desktop search for an area encompassing a 20km radius of the proposed site. This program consults numerous Local, State and Federal government spatial data sets to provide valuable environmental, heritage and other relevant information required in the assessment of the project against the ten clearing principles for native vegetation, regulated under Schedule 5 of the *Environmental Protection Act 1986* (EP Act 1986).

Merivale Road SLK 7.32-7.93 is mapped as forming a component of a single Beard Vegetation Association, namely Fanny Cove 7048. This is lightly cleared with 79% of

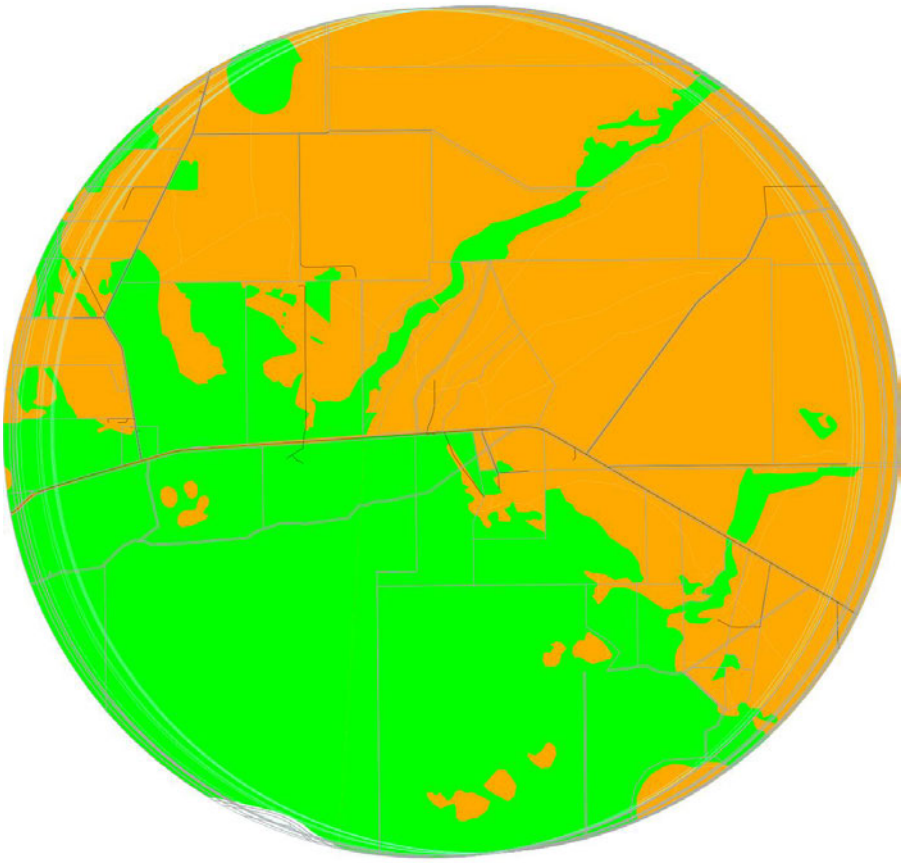
its pre-European extent remaining and is well represented in conservation estate with only 66% of its pre-European extent remaining. According to 2018 data, this vegetation community is adequately represented.

Table 1. Vegetation associations within by percentage of pre-European extent remaining.

Vegetation association	Fanny Cove_7048:
Description	Shrublands; banksia scrub-heath on coast
Pre-European extent remaining within the Shire of Esperance	78.94%
Pre-European extent remaining within Eastern Mallee/ Recherche IBRA sub-region	78.94%
Pre- European extent in land protected for conservation	66.24%

Table 2. Desktop search results

Landform	
Soils	• Gravelly, yellow mottled duplex soil with 30-80 cm of sand over gravel layer • Grey shallow sandy duplex soils with minor pale shallow sand and grey deep sandy duplex soils • Salt affected soils with surface salt crusting
Geology / regolith	• Quaternary aeolian sand overlying Tertiary sediments of the Pallinup formation • Tertiary marine sediments of the Pallinup formation • Tertiary marine sediments of the Pallinup formation over granite and gneiss bedrock
Vegetation remaining within 5km (%)	44.86% of vegetation remains within 5km of the project.

	 Map of remnant vegetation within a 5km buffer produced by DEISIP. Project is highlighted in red, remnant vegetation is in green and cleared vegetation is in orange, road centrelines are in black and cadastre boundaries are in grey.
Threatened and priority flora (Appendix 1)	43 PF and 1 TF were recorded within 20km of the project.
Threatened Ecological Communities	The site is 400m from the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) listed Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia TEC. The site is also 9.2km from the EPBC Act listed Subtropical and Temperate Coastal Saltmarsh TEC.
Threatened and Priority Fauna (Appendix 2)	53 conservation listed fauna species were recorded within 20km of the project.
Closest Conservation Reserve	735m from Reserve 23825 ‘Mullet Lake Nature Reserve’.

Aboriginal Heritage	No listed heritage sites were within the project area.

Site Inspection

A site inspection was conducted by [redacted] (Environmental Coordinator) and [redacted] (Environmental Officer) of the Shire of Esperance on the 9 September 2025.

Approximately 0.12ha of native vegetation was present within the project site, which was classified during the site inspection into three distinct vegetation types, namely –

A. *Melaleuca cuticularis, Acacia cyclops* and *Acacia saligna* over mixed Poaceae weeds.
B. Mallee over mixed shrubs and mixed Poaceae weeds.
C. Mixed shrubs over mixed Poaceae weeds.

Refer to Figure 2 for the map of vegetation types within the Merivale Road, SLK 7.32 - 7.93 site.

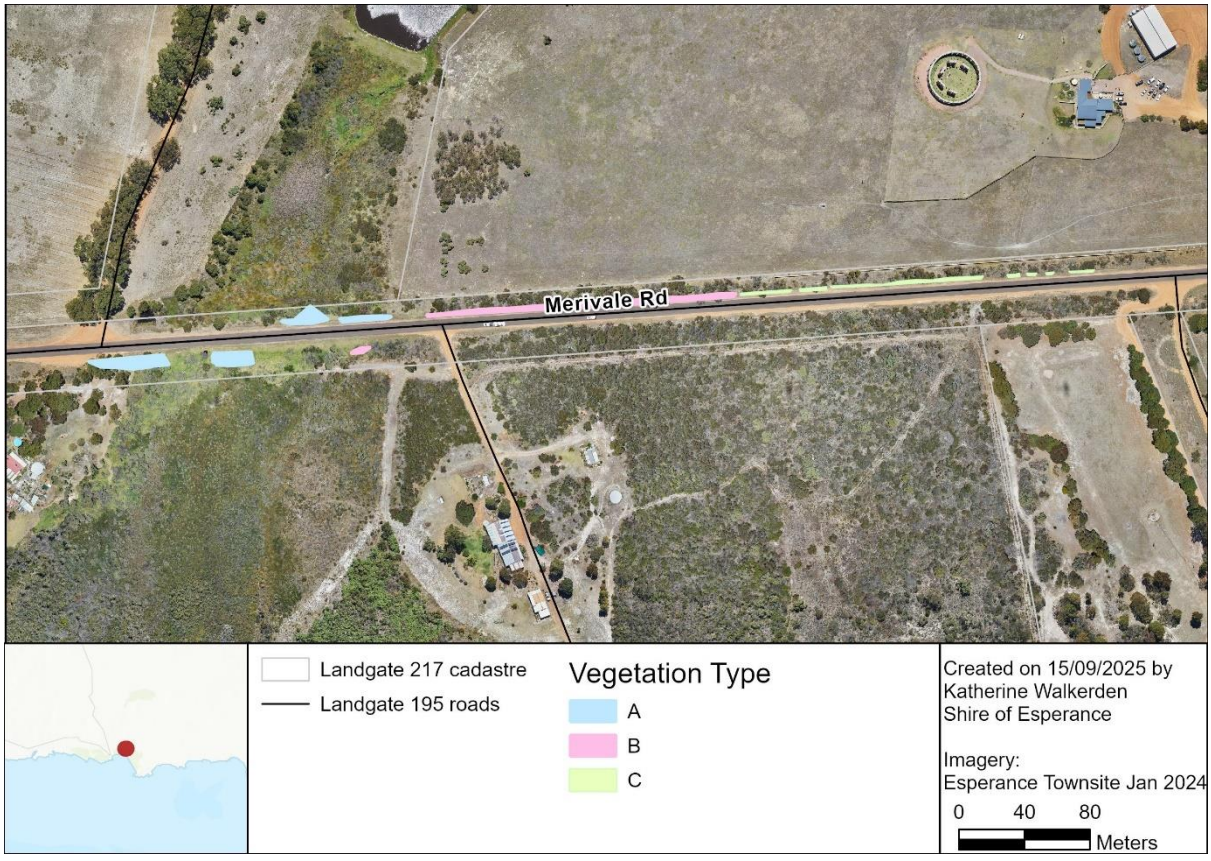


Figure 2. Vegetation types present within proposed Merivale Road, SLK 7.32-7.93 site.

Vegetation condition varied between Degraded and Good condition (Keighery 1994), with the majority (0.08ha) in Degraded condition. Refer to Figure 3 for the map of

vegetation condition across the project site, and Table 3 below for the quantitative distribution of vegetation condition across the vegetation types.

Table 3. Quantitative distribution of vegetation condition by vegetation type within the proposed Merivale Road, SLK 7.32 - 7.93 site.

Vegetation type	Degraded	Good	Total
A	0.06	-	0.06
B	<0.01	0.03	0.03
C	0.02	0.01	0.03
Total	**0.08**	**0.04**	**0.12**

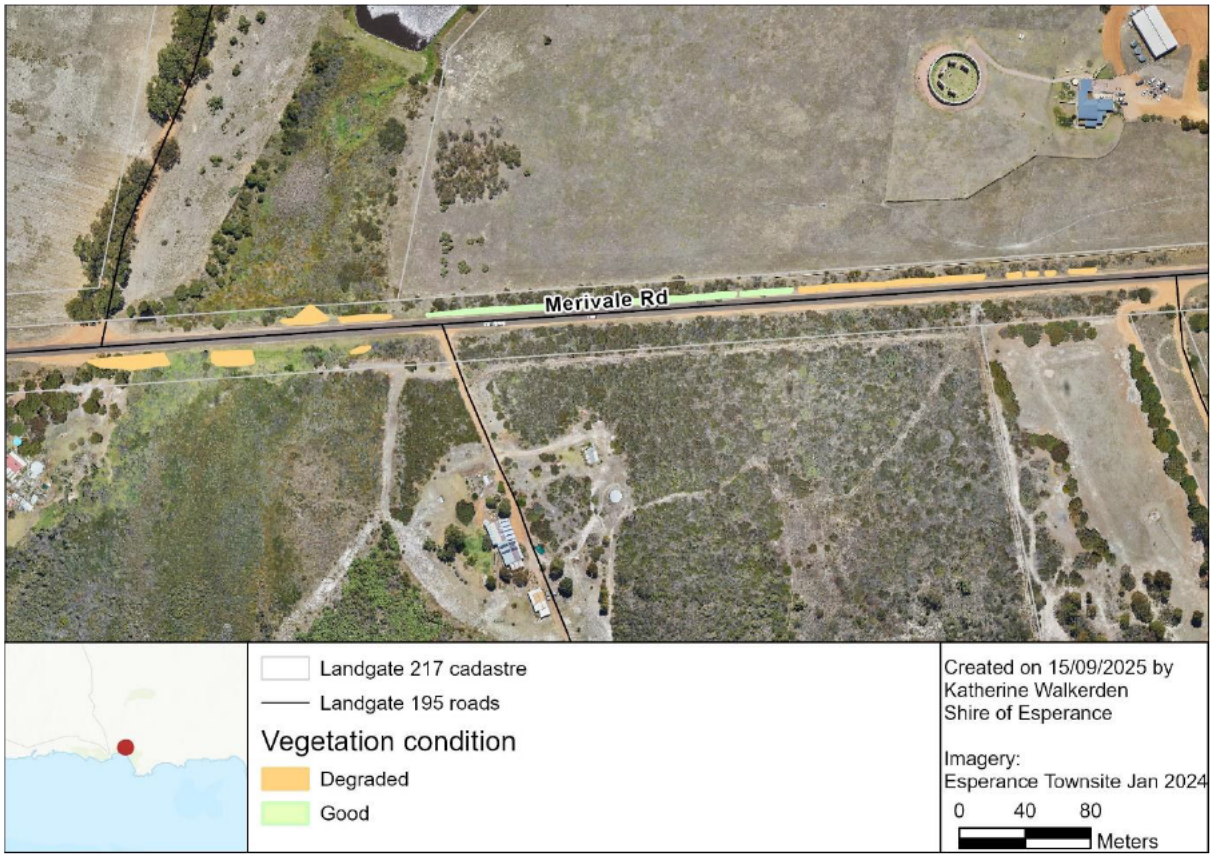


Figure 3. Vegetation condition within proposed Merivale Road, SLK 7.32 - 7.93 site.

The desktop survey mapped the EPBC Act listed 'Proteaceae dominated Kwongkan shrublands of the southeast coastal floristic province of Western Australia (Kwongkan)' TEC within 400m of the project area. Observed vegetation types lacked sufficient Proteaceae species richness and cover to be considered Kwongkan TEC. Parts also were below condition thresholds defined in the Approved Conservation Advice for this community. A total of six proteaceous species were recorded during the survey, however due to the degraded nature of the vegetation proteaceous vegetation cover was significantly below 30% at all vegetative strata in each of the vegetation types.

No other Threatened Ecological Communities or Priority Ecological Communities were recognised as being resembled by any of the mapped vegetation types.

A total of 37 native flora species were identified during the field survey, an additional 26 exotic species were recorded. Problematic environmental weeds observed within the proposed site included *Eragrostis curvula*, *Ehrharta calycina*, and *Briza maxima*. A full species list is presented in Table 4. No TF or PF identified in the desktop assessment were detected.

There was a total of 53 conservation listed fauna species recorded within 20km of the project area. Many of these were marine species or shorebirds which were not relevant to the site. An assessment of the likelihood of occurrence was undertaken post field inspection. There was possibly some very marginal feeding and roosting habitat for Carnaby's Cockatoo, as well as some very marginal Quenda habitat. There was no habiat for any of the other species identified in the desktop assessment.

Table 1. Incidental list of flora species present within the proposed Merivale Road, SLK 7.32 - 7.93 site.

Family	Genus	Species	Invasive
Asphodelaceae	*Asphodelus*	*fistulosus*	X
Asteraceae	*Arctotheca*	*calendula*	X
Asteraceae	*Cotula*	*turbinata*	X
Asteraceae	*Osteospermum*	*ecklonis*	X
Asteraceae	*Sonchus*	*oleraceus*	X
Brassicaceae	*Brassica*	*tournefortii*	X
Caryophyllaceae	*Silene*	*gallica*	X
Casuarinaceae	*Allocasuarina*	*humilis*	
Casuarinaceae	*Allocasuarina*	*thuyoides*	
Casuarinaceae	*Allocasuarina*	*lehmanniana subsp. ecarinata*	
Cyperaceae	*Lepidosperma*	*leptostachyum*	
Cyperaceae	*Ficinia*	*nodosa*	
Cyperaceae	*Gahnia*	*trifida*	
Ericaceae	*Leucopogon*	*obovatus*	
Ericaceae	*Leucopogon*	*parviflorus*	
Euphorbiaceae	*Euphorbia*	*terracina*	X
Fabaceae	*Acacia*	*cyclops*	
Fabaceae	*Acacia*	*gonophylla*	
Fabaceae	*Acacia*	*saligna*	
Fabaceae	*Acacia*	*nigricans*	
Fabaceae	*Medicago*	*sp.*	X

Fabaceae	*Ornithopus*	*compressus*	X
Fabaceae	*Lotus*	*angustissimus*	X
Fabaceae	*Trifolium*	*campestre*	X
Geraniaceae	*Pelargonium*	*capitatum*	X
Haloragaceae	*Glischrocaryon*	*angustifolium*	
Hemerocallidaceae	*Dianella*	*brevicaulis*	
Juncaceae	*Juncus*	*sp.*	
Lauraceae	*Cassytha*	*micrantha*	
Loranthaceae	*Nuytsia*	*floribunda*	
Lythraceae	*Lythrum*	*hyssopifolia*	X
Malvaceae	*Lasiopetalum*	*compactum*	
Myrtaceae	*Calothamnus*	*quadrifidus*	
Myrtaceae	*Eucalyptus*	*gomphocephala*	X
Myrtaceae	*Eucalyptus*	*pleurocarpa*	
Myrtaceae	*Eucalyptus*	*incrassata*	
Myrtaceae	*Eucalyptus*	*varia*	
Myrtaceae	*Eucalyptus*	*leptocalyx*	
Myrtaceae	*Gaudium*	*laevigatum*	X
Myrtaceae	*Melaleuca*	*cuticularis*	
Myrtaceae	*Melaleuca*	*rigidifolia*	
Myrtaceae	*Melaleuca*	*undulata*	
Myrtaceae	*Melaleuca*	*incana subsp. tenella*	
Myrtaceae	*Melaleuca*	*striata*	
Myrtaceae	*Phymatocarpus*	*maxwellii*	
Onagraceae	*Oenothera*	*stricta*	X
Oxalidaceae	*Oxalis*	*pes-caprae*	X
Poaceae	*Briza*	*maxima*	X
Poaceae	*Briza*	*minor*	X
Poaceae	*Cenchrus*	*clandestinus*	X
Poaceae	*Eragrostis*	*curvula*	X
Poaceae	*Lolium*	*sp.*	X
Poaceae	*Ehrharta*	*calycina*	X
Poaceae	*Triticum*	*aestivum*	X
Primulaceae	*Lysimachia*	*arvensis*	X
Proteaceae	*Banksia*	*armata*	
Proteaceae	*Hakea*	*laurina*	
Proteaceae	*Hakea*	*lissocarpha*	
Proteaceae	*Hakea*	*marginata*	
Proteaceae	*hakea*	*trifurcata*	
Proteaceae	*Lambertia*	*inermis*	
Rhamnaceae	*Spyridium*	*globulosum*	
Xanthorrhoeaceae	*Xanthorrhoea*	*platyphylla*	

Photos



Figure 4. Photo of vegetation type A described as: "*Melaleuca cuticularis*, *Acacia cyclops* and *Acacia saligna* over mixed Poaceae weeds". Taken by [redacted] on 9 September 2025.



Figure 5. Photo of vegetation type B described as: "Mallee over mixed shrubs and mixed Poaceae weeds". Taken by [redacted] on 9 September 2025.



Figure 5. Photo of vegetation type C described as: “Mixed shrubs over mixed Poaceae weeds”. Taken by [redacted] on 9 September 2025.

References

Beard J.S (1973). *The vegetation of the Esperance and Malcolm Areas, Western Australia, 1: 250 000 series*, Vegmap Publications Perth.

Commonwealth of Australia, *Environmental Protection and Biodiversity Conservation Act 1999* (Cth), <https://www.legislation.gov.au/Details/C2022C00214>

Commonwealth of Australia (2014). Approved Conservation Advice for Proteaceae-dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia, Department of Agriculture, Water and the Environment. Accessible via http://www.environment.gov.au/biodiversity/threatened/communities/pubs/126-conservation-advice.pdf

Department of Agriculture, Water and the Environment (2022). *Referral guideline for 3 WA threatened black cockatoo species, Carnaby's Cockatoo (Zanda latirostris), Baudin's Cockatoo (Zanda baudinii), and the Forest Red-tailed Black-cockatoo (Calyptorhynchus banksii naso)*. Accessible via: https://www.dcceew.gov.au/sites/default/files/documents/referral-guideline-3-wa-threatened-black-cockatoo-species-2022.pdf

Department of Biodiversity, Conservation and Attractions (2023c), *Priority Ecological Communities for Western Australia Version 35*, Government of Western Australia

Department of Environmental Regulation (2014). *A guide to the assessment of applications to clear native vegetation – Under Part V Division 2 of the Environmental Protection Act 1986*. Published December 2014, Perth, Western Australia. Accessed via https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.

Keighery, B.J. (1994). Bushland plant survey. *A guide to plant community survey for the community*. Wildflower Society of WA (Inc.). Nedlands, Western Australia.

Main Roads of Western Australia (2025). Standard Line Kilometres online application, Government of Western Australia. Accessible via https://mrapps.mainroads.wa.gov.au/gpsslk.

Schokneckt N., Tille P., and Purdie B. (2004). *Soil Landscape Mapping in south-western Australia*, Resource Management Technical Report 20, Department of Agriculture WA.

Thackway R. and Cresswell I.D. (1995) Eds. *An Interim Biogeographic Regionalisation for Australia: A framework for establishing the national system of reserves*. Version 4.0 Australian Nature Conservation Agency, Canberra ACT.

Appendix 1: Threatened and priority flora species identified within 20km

Data provided by Department of Biodiversity, Conservation and Attractions (DBCA) and Western Australian Herbarium in June 2024 was used to assess threatened flora (TF), priority flora (PF), and threatened (TEC) and priority (PEC) ecological communities within 20km radius of the site. Specifically, spatial data included –

- WAHerb extract (DBCA 2024).
- Threatened and Priority Reporting (TPFL; DBCA 2024).
- Esperance District Threatened Flora (DBCA 2024).

Species	Status	Distance
Acacia incanicarpa	P2	15.63
Aldrovanda vesiculosa	P2	17.49
Anigozanthos bicolor subsp. minor	T	16.05
Astartea elobata	P2	16.30
Austrobaeckea uncinella	P3	6.02
Banksia prolata subsp. calcicola	P4	10.58
Comesperma calcicola	P3	5.32
Comesperma lanceolatum	P2	14.99
Corysanthes limpida	P4	15.37
Cyathostemon sp. Esperance (A. Fairall 2431)	P1	14.45
Dampiera decurrens	P2	19.24
Dampiera sericantha	P1	6.92
Daviesia pauciflora	P3	5.95
Eucalyptus aquilina	P4	16.28
Eucalyptus foliosa	P1	19.27
Eucalyptus insularis subsp. insularis	P4	19.27
Eucalyptus ligulata subsp. ligulata	P4	16.28
Eucalyptus preissiana subsp. lobata	P4	18.35
Eucalyptus semiglobosa	P3	1.59
Eucalyptus x missilis	P4	12.73
Gonocarpus simplex	P4	18.58
Goodenia exigua	P2	13.25
Goodenia quadrilocularis	P2	19.11
Grevillea baxteri	P4	13.43
Hibbertia carinata	P1	16.21
Hibbertia turleyana	P2	14.82
Hopkinsia adscendens	P3	14.45
Lepidium fasciculatum	P3	14.45
Lepyrodia fortunata	P2	16.65

Leucopogon apiculatus	P3	19.08
Leucopogon corymbiformis	P2	7.46
Leucopogon interruptus	P3	7.67
Lobelia archeri	P1	7.52
Microtis quadrata	P4	17.55
Myosotis australis subsp. australis	P4	19.62
Myriophyllum muelleri	P2	17.27
Paracaleana parvula	P2	19.87
Pityrodia chrysocalyx	P3	13.91
Rumicastrum chamaecladum	P2	16.65
Styphelia rotundifolia	P3	17.70
Tecticornia indefessa	P2	5.76
Utricularia helix	P2	17.38
Utricularia oppositiflora	P3	17.33
Utricularia westonii	P2	17.38

Appendix 2: Threatened fauna species identified within 20km

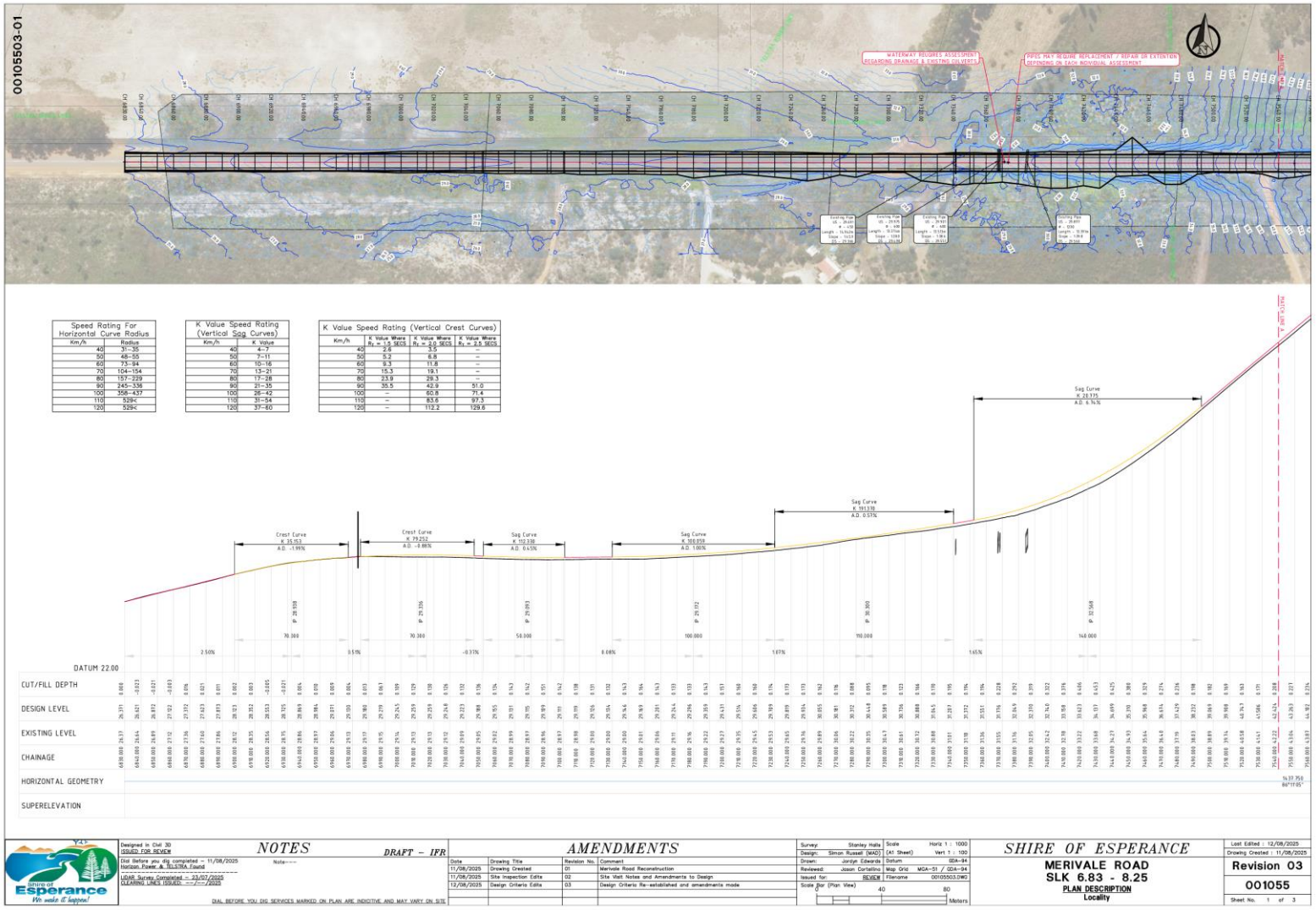
Assessment of Threatened and Priority fauna potentially occurring within 20km of the site was conducted utilising the following sources –

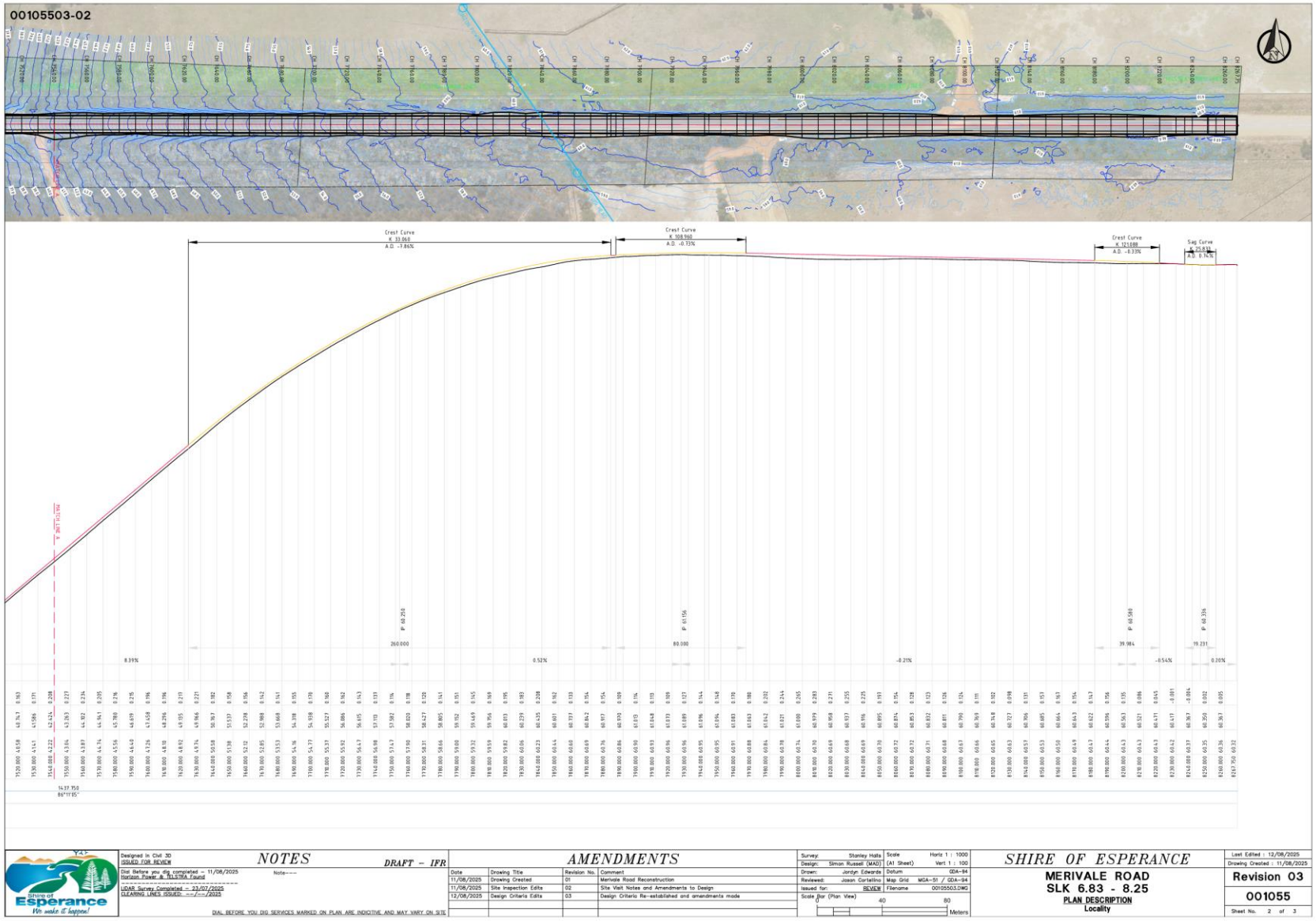
- DBCA Threatened Fauna database (DBCA 2024)

Taxon	Common name	Conservation code	Distance (km)
Zanda latirostris	Carnaby's cockatoo	EN	2.21
Calidris ruficollis	Red-necked stint	MI	3.35
Calidris ferruginea	Curlew sandpiper	CR	3.35
Falco peregrinus	Peregrine falcon	OS	3.35
Cereopsis novaehollandiae grisea	Recherche Cape Barren goose	VU	3.35
Limosa lapponica	Bar-tailed godwit	MI	3.57
Tringa nebularia	Common greenshank	MI	3.57
Hydroprogne caspia	Caspian tern	MI	3.57
Charadrius cucullatus	Hooded plover	P4	5.38
Calidris acuminata	Sharp-tailed sandpiper	MI	5.38
Calidris alba	Sanderling	MI	5.50
Charadrius leschenaultii	Greater sand plover	VU	5.50
Charadrius bicinctus	Double-banded plover	MI	5.50
Charadrius mongolus	Lesser sand plover	EN	5.50
Pluvialis fulva	Pacific golden plover	MI	5.50
Calidris melanotos	Pectoral sandpiper	MI	5.50
Actitis hypoleucos	Common sandpiper	MI	5.50
Thalasseus bergii	Crested tern	MI	5.57
Plegadis falcinellus	Glossy ibis	MI	5.66
Pluvialis squatarola	Grey plover	MI	5.72
Oxyura australis	Blue-billed duck	P4	5.79
Isoodon fusciventer	Quenda	P4	6.70
Tringa glareola	Wood sandpiper	MI	9.15
Neophoca cinerea	Australian sea-lion	EN	9.72
Leipoa ocellata	Malleefowl	VU	10.38
Puffinus huttoni	Hutton's shearwater	EN	10.74
Elanus scriptus	Letter-winged kite	P4	10.78
Ardenna carneipes	Flesh-footed shearwater	VU	10.78
Dermochelys coriacea	Leatherback turtle	VU	10.87
Calidris tenuirostris	Great knot	CR	10.99
Apus pacificus	Fork-tailed swift	MI	12.37
Eubalaena australis	Southern right whale	VU	12.65

Thalassarche chlororhynchos	Atlantic yellow-nosed albatross	VU	13.26
Tringa stagnatilis	Marsh sandpiper	MI	13.51
Notamacropus irma	Western brush wallaby	P4	14.44
Stercorarius antarcticus lonnbergi	Brown skua	P4	14.64
Westralunio carteri	Carter's freshwater mussel	VU	14.64
Calidris canutus	Red knot	EN	14.69
Tringa brevipes	Grey-tailed tattler	P4 & MI	14.73
Ardenna tenuirostris	Short-tailed shearwater	MI	14.90
Stercorarius parasiticus	Arctic jaeger	MI	14.90
Pezoporus flaviventris	Western ground parrot	CR	14.95
Acanthophis antarcticus	Southern death adder	P3	15.57
Arctocephalus forsteri	New Zealand fur seal	OS	15.57
Botaurus poiciloptilus	Australasian bittern	EN	16.87
Oceanites oceanicus	Wilson's storm-petrel	MI	17.06
Arenaria interpres	Ruddy turnstone	MI	17.06
Numenius phaeopus	Whimbrel	MI	17.06
Thalassarche cauta cauta	Shy albatross	VU	17.06
Botaurus dubius	Australian little bittern	P4	17.72
Atelomastix dendritica	Recherche atelomastix millipede	VU	18.20
Pandion haliaetus	Osprey	MI	19.00

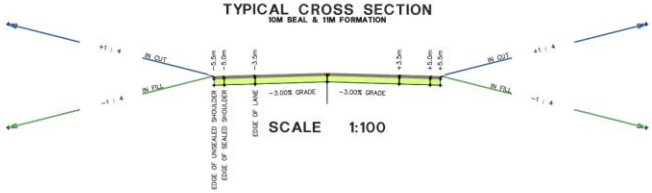
Appendix 3: Infrastructure plans




00105503-02
Crest Curve
K 33.060
A.D. -7.86%
Crest Curve
K 108.960
A.D. -0.75%
Crest Curve
K 121.080
A.D. -0.33%
Sag Curve
K 25.833
A.D. 0.74%
8.39%
0.52%
-0.21%
-0.54%
0.20%
260.000
80.000
39.984
19.231
R 68.295
R 61.156
R 68.580
R 68.334
NOTES
DRAFT - IFR
Designed in Civil 3D
ISSUED FOR REVIEW
Dial Before you dig completed - 11/08/2025
Horizon Power & TELSTRA Found
LiDAR Survey Completed - 23/07/2025
CLEARING LINES ISSUED: --/--/2025
DIAL BEFORE YOU DIG SERVICES MARKED ON PLAN ARE INDICITIVE AND MAY VARY ON SITE
AMENDMENTS
Date | Drawing Title | Revision No. | Comment
11/08/2025 | Drawing Created | 01 | Merivale Road Reconstruction
11/08/2025 | Site Inspection Edits | 02 | Site Visit Notes and Amendments to Design
12/08/2025 | Design Criteria Edits | 03 | Design Criteria Re-established and amendments made
Survey: Stanley Halls
Design: Simon Russell (MAD)
Drawn: Jordyn Edwards
Reviewed: Jason Cortellino
Issued for: REVIEW
Scale (Plan View) 0 40 80 Meters
Scale (A1 Sheet) Horiz 1 : 1000 Vert 1 : 100
Datum GDA-94
Map Grid MGA-51 / GDA-94
Filename 00105503.DWG
SHIRE OF ESPERANCE
MERIVALE ROAD
SLK 6.83 - 8.25
PLAN DESCRIPTION
Locality
Last Edited : 12/08/2025
Drawing Created : 11/08/2025
Revision 03
001055
Sheet No. 2 of 3

001055503-03

MERIVALE ROAD
TYPICAL CROSS SECTION
10M SEAL & 11M FORMATION



SCALE 1:100

Designed in Civil 3D
ISSUED FOR REVIEW

Dial Before you dig completed – 11/08/2025
Horizon Power & TELSTRA Found

LiDAR Survey Completed – 23/07/2025
CLEARING LINES ISSUED: --/--/2025

NOTES

DRAFT – IFR

Note---

DIAL BEFORE YOU DIG SERVICES MARKED ON PLAN ARE INDICITIVE AND MAY VARY ON SITE

AMENDMENTS

Date	Drawing Title	Revision No.	Comment
11/08/2025	Drawing Created	01	Merivale Road Reconstruction
11/08/2025	Site Inspection Edits	02	Site Visit Notes and Amendments to Design
12/08/2025	Design Criteria Edits	03	Design Criteria Re-established and amendments made

Survey:	Stanley Halls	Scale	Horiz 1 : 1000
Design:	Simon Russell (MAD)	(A1 Sheet)	Vert 1 : 100
Drawn:	Jordyn Edwards	Datum	GDA-94
Reviewed:	Jason Cortellino	Map Grid	MGA-51 / GDA-94
Issued for:	REVIEW	Filename	001055503.DWG

Scale Bar (Plan View): 0 40 80 Meters

SHIRE OF ESPERANCE

MERIVALE ROAD
SLK 6.83 - 8.25
PLAN DESCRIPTION
Locality

Last Edited : 12/08/2025
Drawing Created : 11/08/2025

Revision 03

001055

Sheet No. 3 of 3