

LOT 2602 MCDONALD ROAD, KARRIDALE



November 2017

Flora and fauna assessment



Environmental
& Landscape
Management

Prepared by Sean Smith of Environmental and Landscape Management

Email: sean@eml.com.au

Mob. 0437 806 119

LOT 2602 McDONALD ROAD, KARRIDALE

Flora and fauna assessment

Table of Contents

EXECUTIVE SUMMARY	3
INTRODUCTION.....	3
Scope of report.....	4
Biodiversity conservation.....	4
Flora assessments	6
Fauna assessment.....	6
THE STUDY AREA	6
Tenure and vesting.....	6
The Natural Environment	7
The biological environment	7
Threatened and Priority fauna.....	10
Local and Regional Significance	11
Threatened Ecological Communities.....	11
The Physical Environment.....	13
Soils.....	13
Hydrology.....	14
SITE ASSESSMENT METHODOLOGY	14
RESULTS AND DISCUSSION	14
Site survey results.....	14
Flora species.....	14
Vegetation.....	15
Conservation status of flora.....	20
Vegetation condition.....	20
Fauna values.....	21
Environmental Protection and Biodiversity Conservation Act database search	24
CONCLUSIONS AND RECOMMENDATIONS.....	27
REFERENCES	28
APPENDIX 1: SPECIES LIST	31
APPENDIX 2: WAYPOINTS AND AERIAL PHOTOGRAPHS OF LOCATIONS.....	33

Copyright: The concepts and information contained in this document are the property of SJ Smith and Associates Environmental and Landscape Management. Use or copying of this document in whole or in part without the written permission of SJ Smith and Associates Environmental and Landscape Management constitutes an infringement of copyright.

Disclaimer: All attempts have been made to ensure the accuracy of the material presented in this report. However, some information may be inaccurate due to changes to database information or government policy or legislation. Seasonal variation and the ephemeral nature of native vegetation also present limitations on the overall accuracy of the information in this report

DOCUMENT STATUS

STATUS	DATE	ISSUED
Original	11 December 2017	SJS

Executive summary

Lot 2602 McDonald Road, Karridale ('the site') is currently used for pasture and grazing. The current owners plan to plant tree crops on the site and will require dam water for irrigation. The proposal is to construct a dam on the streamline that passes in a north-south direction through the centre of the site.

The construction of the new dam will require the clearing of approximately 1.4 hectares of remnant vegetation. A further 2.8 hectares of vegetation will be retained downstream of the remnant that will be affected by the dam proposal. Other small remnants are found on other parts of the property. These remnants mostly occur on rocky outcrops and consist of groves of marri and willow peppermint trees with a degraded understorey.

This report outlines the findings of a number of daytime traverses of the area subject to clearing to observe flora and fauna species, night time call surveys for frog species and the results of infra-red camera monitoring for other fauna species.

All of the vegetation on the site forms part of the poorly represented Glenarthy Hills vegetation communities. The vegetation in the area that is proposed for clearing consists of a dense canopy of sedges with emergent willow peppermint and Melaleuca trees surrounded by grassy paddocks with some larger willow peppermint and marri trees on the fringe of the vegetated creek line. The vegetation immediately north of this area consists of more open willow peppermint woodland.

Staff from the Department of Biodiversity, Conservation and Attractions (DBCA) have conducted surveys of the site and found a family of three Western Ringtail Possums (*Pseudocheirus occidentalis*) and the chimney structures of burrowing crayfish. Common frog species observed at the site were *Crinia glauerti* which were abundant along most of the creek length with occasional *Crinia georgiana*. White bellied frogs were not observed at the site nor was the site considered to form suitable habitat for white bellied frogs. A large flock of Black Cockatoos was observed above the remnant area.

Introduction

Lot 2602 McDonald Road, Karridale is currently being used for grazing and pasture production. In order to expand production to include perennial tree crops the proponent would like to construct a dam on the winter creek line that runs through the site.



FIGURE 12: OPEN STREAMBED SOUTH OF THE DENSE VEGETATION THAT IS SUBJECT TO THE CLEARING PROPOSAL



FIGURE 13: OPEN STREAMBED SOUTH OF THE DENSE VEGETATION THAT IS SUBJECT TO THE CLEARING PROPOSAL

Staff from the Department of Biodiversity, Conservation have undertaken an assessment of the site. They described the vegetation as follows:

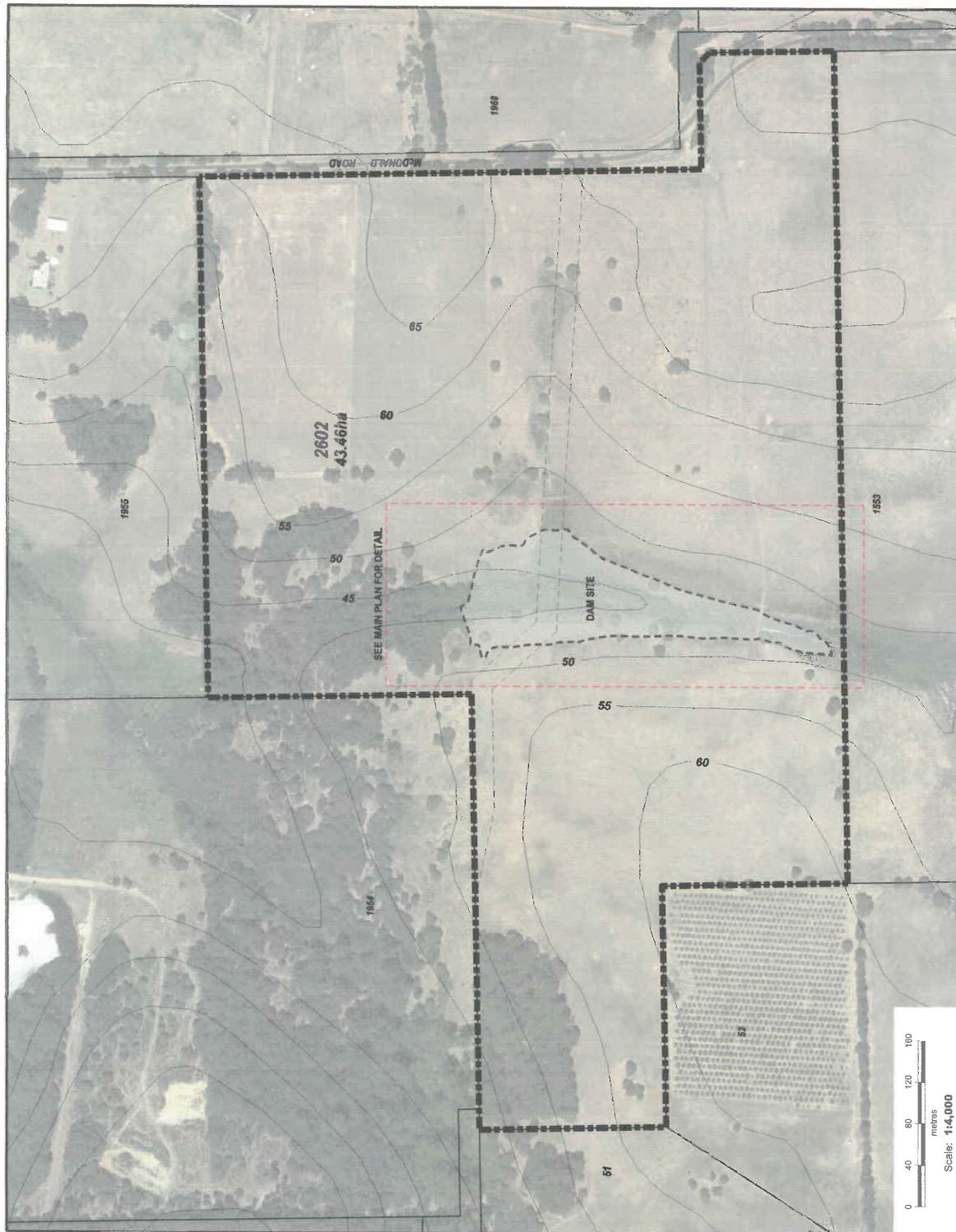
The riparian habitat could be characterised into three distinctive forms;

- 1) Tall closed overstorey canopy of Agonis and Marri over open sparse scattered grasses and bare soils fringing the creek channel in the north,
- 2) Dense closed canopy of sedges to 2.5-3.0m tall with emergent Agonis and Melaleuca stems to 4-5m over exposed inundated soil, and
- 3) A version of community heavily disturbed by stock grazing, with invasive pasture grasses and weeds in the southern extremity.

All of these were underlain by a relatively fast flowing and flooding creek system with what appeared to be a relatively high composition of loam and fine clay particles in the soil.



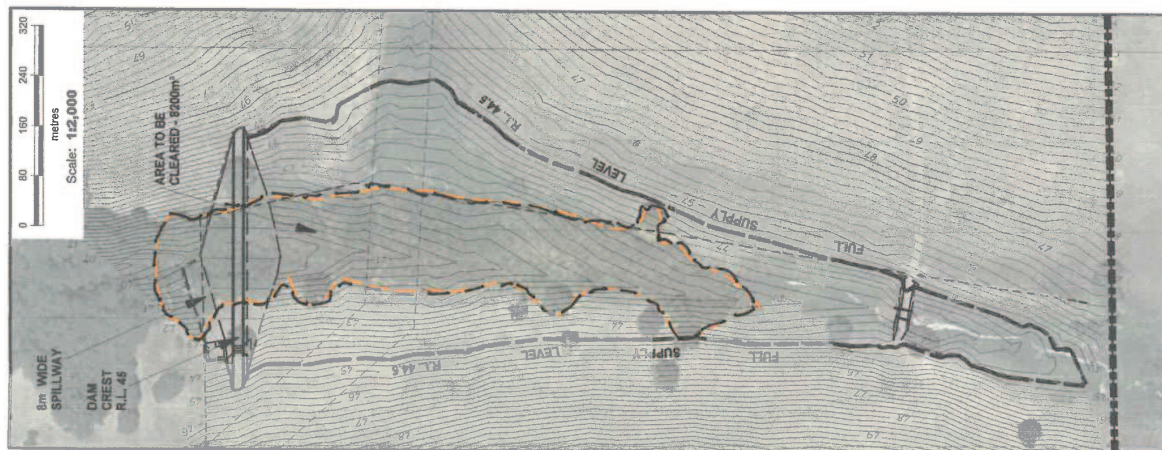
FIGURE 9: OPEN GRASSED Paddock FRINGING THE REMNANT STREAMLINE VEGETATION



DAM :
 WALL - HEIGHT 5.0m (45.0 - 40.0)
 - LENGTH 105m
 - CREST R.L. 45.0
 - FULL SUPPLY LEVEL - R.L. 44.5 (WEIR TOP)
 - UPSTREAM BATTER 1V: 3h
 - DOWNSTREAM BATTER 1V: 2.5h

LEGEND

- APPLICATION BOUNDARY
- AREA TO BE CLEARED (8200m²)



Title: **PROPOSED DAM DEVELOPMENT PLAN - J. PATTON**
LOT 2602 McDONALD ROAD, KARRIDALE

Figure: **1** Scale: **AS SHOWN** Revision No: **A**
 Date: **DECEMBER 2017** Designer: **W.S.** Job No: *****

Drawn: **B.L.**
 E Reference: **S. Agtech**