

MODIFICATION OF SPRING FARM QUARRY CONSENT (DA 75/256)

Lot 22 (No. 186) DP 833317 and Part
Lot 32 (No. 172) (DP 635271)

Macarthur Road, Spring Farm

ENVIRONMENTAL ASSESSMENT



Prepared For:



M. Collins and Sons Holdings Pty Ltd

APPENDIX L



Prepared By:

February 2018



LANDSCAPE RESTORATION AND BUSH REGENERATION REPORT

SPRING FARM QUARRY

Compiled by – M Collins & Sons Holdings Pty Ltd - with Photographs by Bowantz Bushfire
and Environmental Pty Ltd

27 February 2018

Introduction

During the 2017 calendar year restoration works have been carried out at three of the special feature areas within the site that include :

- **Nepean River Riparian Vegetation** Works have been carried out within a section of the one hectare area of land where the existing vegetation is being restored (**Zone 1a**)
- **Dry River Anabranh Vegetation** There is approximately one hectare of vegetation area adjacent to the dry anabranh of the Nepean River that is regenerating existing vegetation and introducing additional plantings where necessary to improve the structure of this landscape feature
- **Agricultural Production Land** Over the last twelve months there has been two hectares of land that is being returned to Class One agricultural lands on the western end of the quarry area . The land has been reformed and graded in a south westerly direction towards the Nepean river to ensure that the final land form will integrate with adjoin lands and be freely draining.

Site Preparation

Site Protection

Restoration zones 1 and 2 (Figure 3) have been protected by necessity with the adjacent quarry extraction process and to restrict access into the area. The protection of these areas ensures the long term effective management of the rehabilitation areas and associated riparian habitat and its wild life linkages. It is also intended to prevent adjoining livestock from entering the restoration area and damaging the revegetation works

Weeding within Zone 1a (Nepean River- proposed plantings)

Throughout the last twelve months a concentrated effort has been made within the riparian areas adjoining the Nepean river to remove weeds and non-native vegetation from this landscape unit, This has involved cutting and poisoning non-native weeds ,grasses and shrubs and clearing away the vegetative waste . There are before and after photographs of the works that have been undertaken within this area of the site





This work has been carried out within an area of one hectare of riverside land that was extremely degraded vegetation however the native trees and grasses that are present in the area now provide a structured layer that can be complemented by planting native species that over time will be able to dominate this landscape feature adjacent to the river.

Weeding and Preparation within Zone 1B (Nepean River – Core Riparian Zone)

The flat grassy areas parallel to the river outside the existing vegetation area on the river bank (non-batter) are being subjected to weed management to eradicate undesirable weeds and shrubs prior to planting directly into the natural topsoil horizon.



The battered areas within Zone 1 adjacent to the Nepean River have been deep ripped and retopped with topsoil from the soil being extracted within the extraction area. The topsoil depth is a minimum of 500mm

Zone 2a and 2b - Dry Anabranh – planting and rehabilitation works

Throughout 2017 there has been a comprehensive bush regeneration work undertaken following the weeding that had been carried out in the two previous years when large woody weeds and a variety of other environmental and noxious weeds were removed along the eastern and western sides of the dry anabranh



Following the completion of the weeding additional native plant stock has been planted along the dry anabranch to strengthen the diversity of species present in this important ecological zone,



The establishment of plantings has necessitated watering being carried out due to the exceptionally dry season and below average rainfall in 2017. This task has necessitated an on site water tank to ensure adequate water is on hand as required

Nesting Boxes

The installation of nesting boxes for fauna habitat is one method being utilised on site as compensation for lack of habitat that is available within the revegetation areas. The intention is that the boxes will artificially increase the amount of locally available hollows for arboreal marsupials thereby increasing the value of the revegetation as a habitat as a resource



Zone 3 Future Agricultural Production Areas

This zone is located in the open paddock area surrounded on three sides by the battersfacing Camden By-Pass bridge and adjoining the Nepean River on the west and the dry anabranch on the eastern side. The entire ground surface is ripped along the contours to fracture the soil and then cross rip to help retain moisture in the subsoil.

The entire surface is then backfilled with a minimum of 500mm stockpiled topsoil . Once the surface preparation is completed grass has been planted and additional pasture has been sown into the topsoil,



