

APPENDIX Q3

EASTERN PADDOCK SIGNIFICANT ENVIRONMENTAL BENEFIT REVEGETATION PLAN

ANGAS PROCESSING FACILITY MISCELLANEOUS PURPOSES LICENSE APPLICATION 2019/0826



ABN | 67 062 576 238
Unit 7 / 202-208 Glen Osmond Road | Fullarton SA 5063

TERRAMIN AUSTRALIA LIMITED

Angas Zinc Mine

Eastern Paddock Significant Environmental Benefit Revegetation Plan

May 2013



1 Introduction

During construction of the Angas Zinc Mine, minimal vegetation clearance was required, however, during the construction of the Tailings Storage Facility (TSF), six dryland teatrees (*Melaleuca lanceolata*) required clearing. As required in the 2007 approved PEPR, an area of 3.4ha is required to be set aside as Significant Environmental Benefit (SEB) for vegetation clearance, calculated as per native vegetation guidelines for scattered tree and DMITRE /native Vegetation Council guidelines.

The area allocated for the SEB in the 2007 PEPR is located where current mining infrastructure stands, hence direct seeding cannot commence until cessation of mining operations. Terramin are therefore proposing to use 6ha of the eastern paddock (figure 1) thus enabling the SEB process to commence during the 2013 wet season.

Terramin have incorporated a number of old tea trees located in the eastern paddock into the SEB planting to ensure future protection of these significant trees. Approximately 800 native plants were planted in this area during 2012 which proved highly successful.

2 Scope of Works

Approximately 90kg of native seed will be direct seeded on approximately 6ha of land in the eastern paddock (east of the mining lease) and south western paddock (figure 1). This area will be nominated as the SEB offset in place of the area allocated in the 2007 PEPR. Direct seeding will commence during winter preferably during June or July.

3 Site preparation

Prior to direct seeding significant preparation is required aimed at reducing the weed seed bank within the topsoil profile. This preparation through herbicide spraying will greatly reduce the risk of a poor result. The recent rain experienced in late April/May has resulted in weed emergence. Broad acre spraying will therefore be undertaken in May/June and two or three weeks prior to direct seeding. The area has been ripped to loosen the soil prior to seeding.

4 Species Selection

Native seed collection during 2012/2013 was undertaken around the mining lease and neighbouring areas (by appropriately licensed seed collection staff) which will be used for the SEB area. The remainder of the seed is of local provenance bought from local commercial seed suppliers (table 1).

Table 1: Native species allocated to the SEB area

Species Name	Common Name
Dicotyledons (Shrubs and Tree Species)	
<i>Acacia microcarpa</i>	Manna Wattle
<i>Acacia paradoxa</i>	Kangaroo Thorn
<i>Acacia pycnantha</i>	Golden Wattle
<i>Allocasuarina verticillata</i>	Weeping Sheoak
<i>Atriplex semibaccata</i>	Spreading Saltbush
<i>Enchylaena tomentosa</i>	Ruby Saltbush
<i>Eucalyptus conglobata</i>	
<i>Eucalyptus incrassata</i>	Yellow mallee
<i>Eucalyptus odorata</i>	Peppermint Box
<i>Eucalyptus oleosa</i>	Red mallee
<i>Melaleuca acuminata</i>	Honey myrtle
<i>Melaleuca lanceolata</i>	Dryland Teatree
<i>Melaleuca uncinata</i>	Broombush
<i>Senna artemisioides ssp.petiolaris</i>	Punty Bush
Monocotyledons (grass Species)	
<i>Austrostipa ssp.</i>	Spear Grass
<i>Chlorus truncata</i>	Windmill Grass
<i>Gahnia lanigera</i>	Desert saw sedge
<i>Cymbopogon ambiguous</i>	Lemon grass
<i>Bothriochloa macra</i>	Red grass
<i>Austrodanthonia geniculata</i>	Wallaby grass

5 Direct Seeding

The design for direct seeding will be alternated rows of dicots and monocots. The areas will be separate to allow the specific maintenance intervention that each requires. Once the areas are established and plants have set seed, the seed will eventually move into neighbouring areas and create a composite monocot-dicot mix.

The dicots will be mixed with a native type fertiliser and seeded with a vehicle towed direct-seeder. The grass seed will be hand sown and harrowed in between the dicots.

6 Maintenance

Spraying with selective herbicides will occur after direct seeding prior to seed set for weed control purposes with special care taken to avoid off target spraying. An ongoing spray program will be in place until seedlings are no longer suppressed by weeds, typically this is a two year timeframe, but is dependent upon seasons. Rabbit baiting and warren fumigation will be undertaken in the summer months.

7 Monitoring

As required in the 2007 PEPR, the implementation of SEB plan will be assessed and reported annually. This assessment will be reported in the annual compliance report.



Figure 1: 6 ha of the Eastern Paddock proposed for allocation to the SEB (highlighted in orange)

