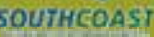




Successful biodiverse seeding in deep...deep...deep sands!

Robyn Cail, South Coast Natural Resource Management

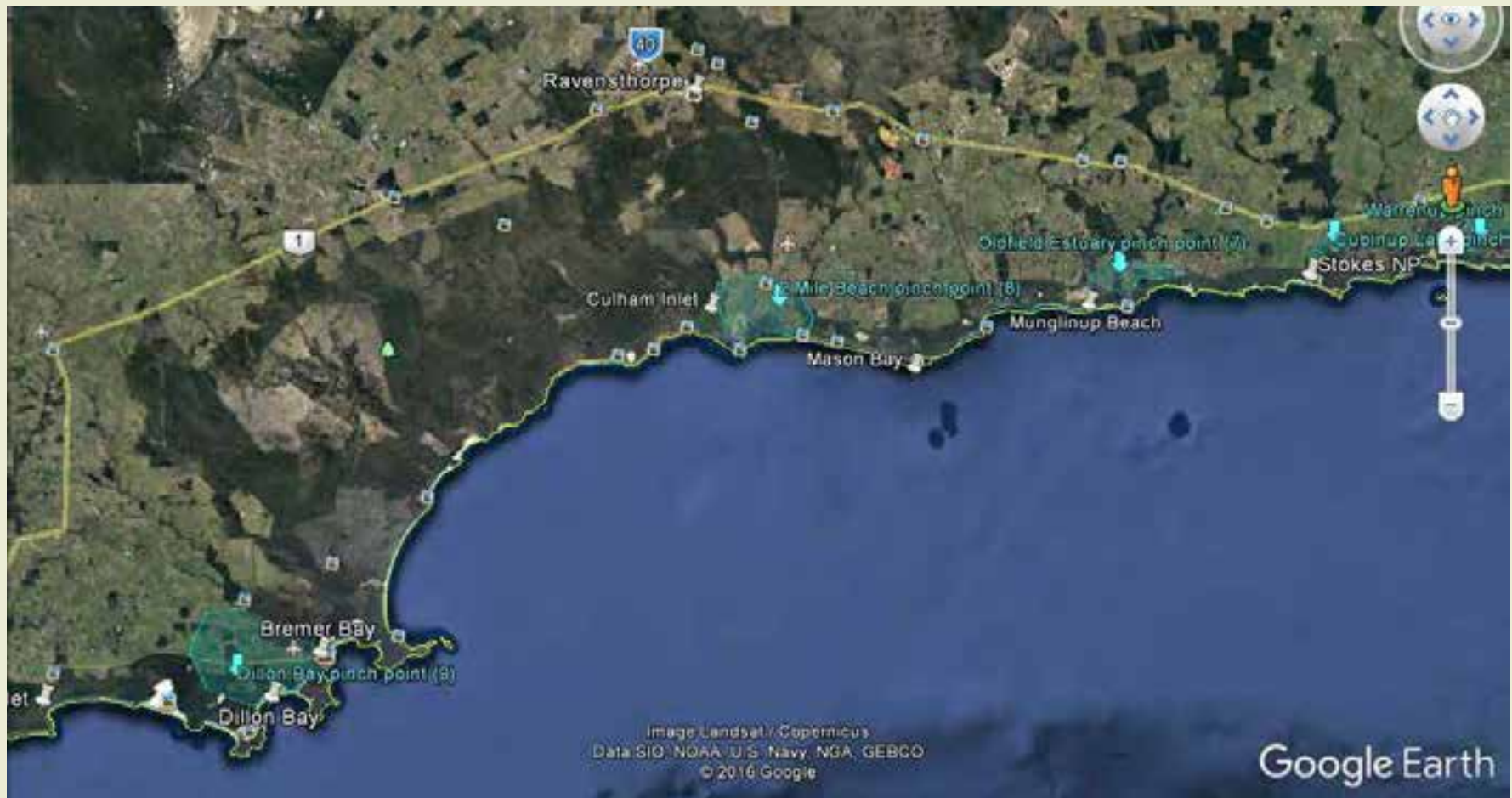


Australian Government



Photo courtesy E Adams/DEC

Project Planning - Priorities



Biodiversity plantings expanding the extent of native habitat within priority areas of the coastal corridor building resilience and connectivity.



Priority Coastal Rehabilitation

Understanding the critical pathways to successful rehabilitation:

- Project goal; site characteristics, site evaluation, site specific prescription, site preparation, establishment, maintenance to maximise persistence and vigour...
- Our goal was to revegetate 130ha maximising species richness with local provenance seed and seedlings



Revegetation Information Pack



A resource developed by South Coast NRM to build capacity of people to restore biodiversity values to their landscape through revegetation within the south coast region of WA.



Compiled by Wendy Bradshaw and Robyn Cail
September 2012



CARING
FOR
OUR
COUNTRY



Project Planning - Dieback

www.dieback.net.au

Apps 6. Test PC Speed Imported From IE



Home About Project Dieback Latest News Framework MAPPING Contacts Resources

The fight against Phytophthora dieback in Western Australia



Phytophthora dieback is the biggest threat to biodiversity in Western Australia and has now spread throughout the south-west from Eneabba to Esperance.

Phytophthora dieback is a deadly, introduced plant pathogen and is unusual as it has animal, fungal and plant characteristics. Scientifically known as *Phytophthora cinnamomi*, it is classified as a water mould belonging to the new ancestral kingdom Chromista.

Phytophthora dieback lives in soil and attacks the roots of many native plants. It also

www.dieback.net.au

... before Dieback



... after Dieback



What does an active dieback front look like in the bush?



One Bulldozer making this track dropped infested soil causing....

- a **major disruption of community structure**
- possible **extinction** of populations of some plant species
- a massive **reduction in primary productivity**
- significant **habitat loss and degradation** for dependent plants and animals

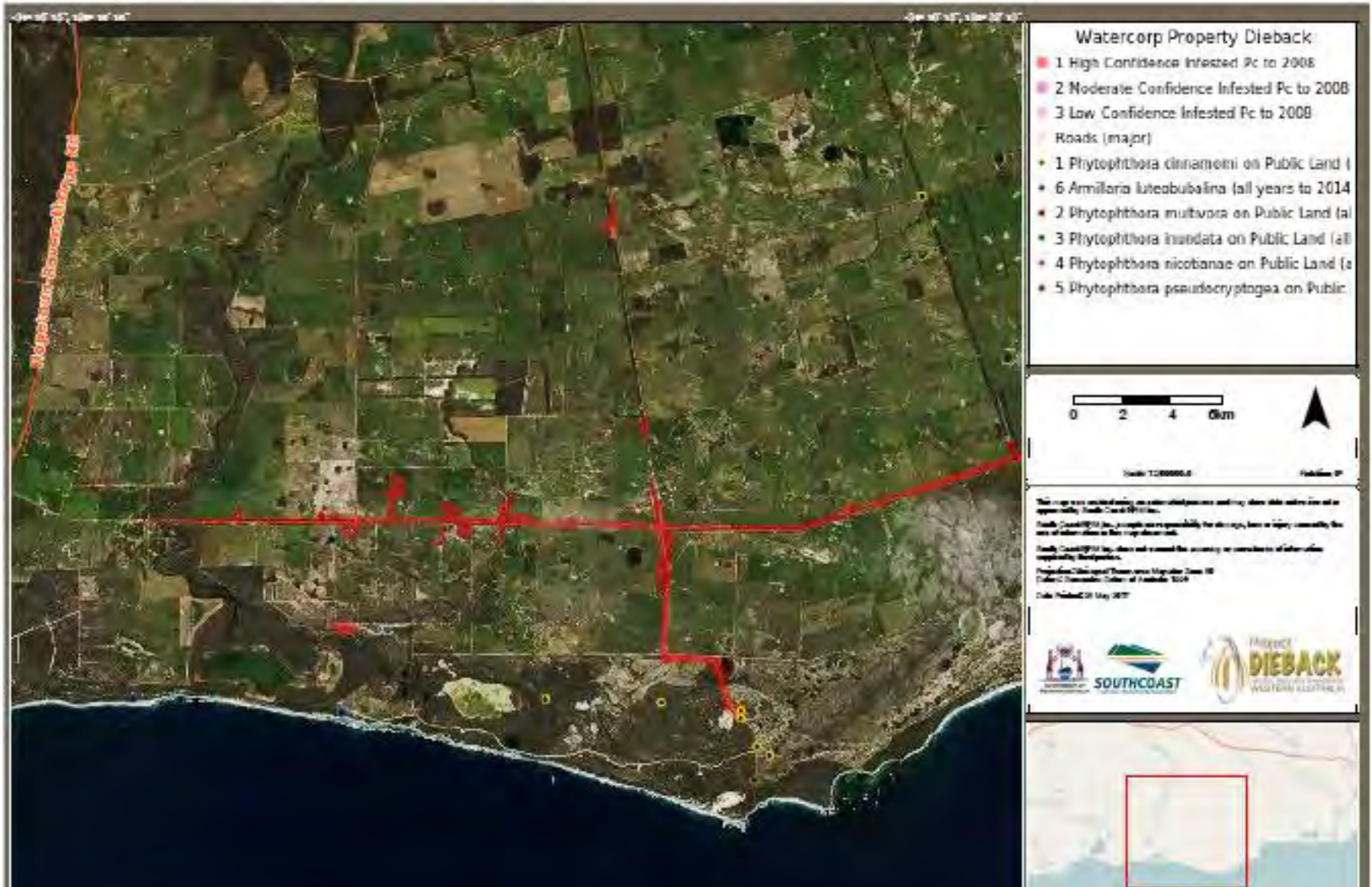
Project Planning - Dieback

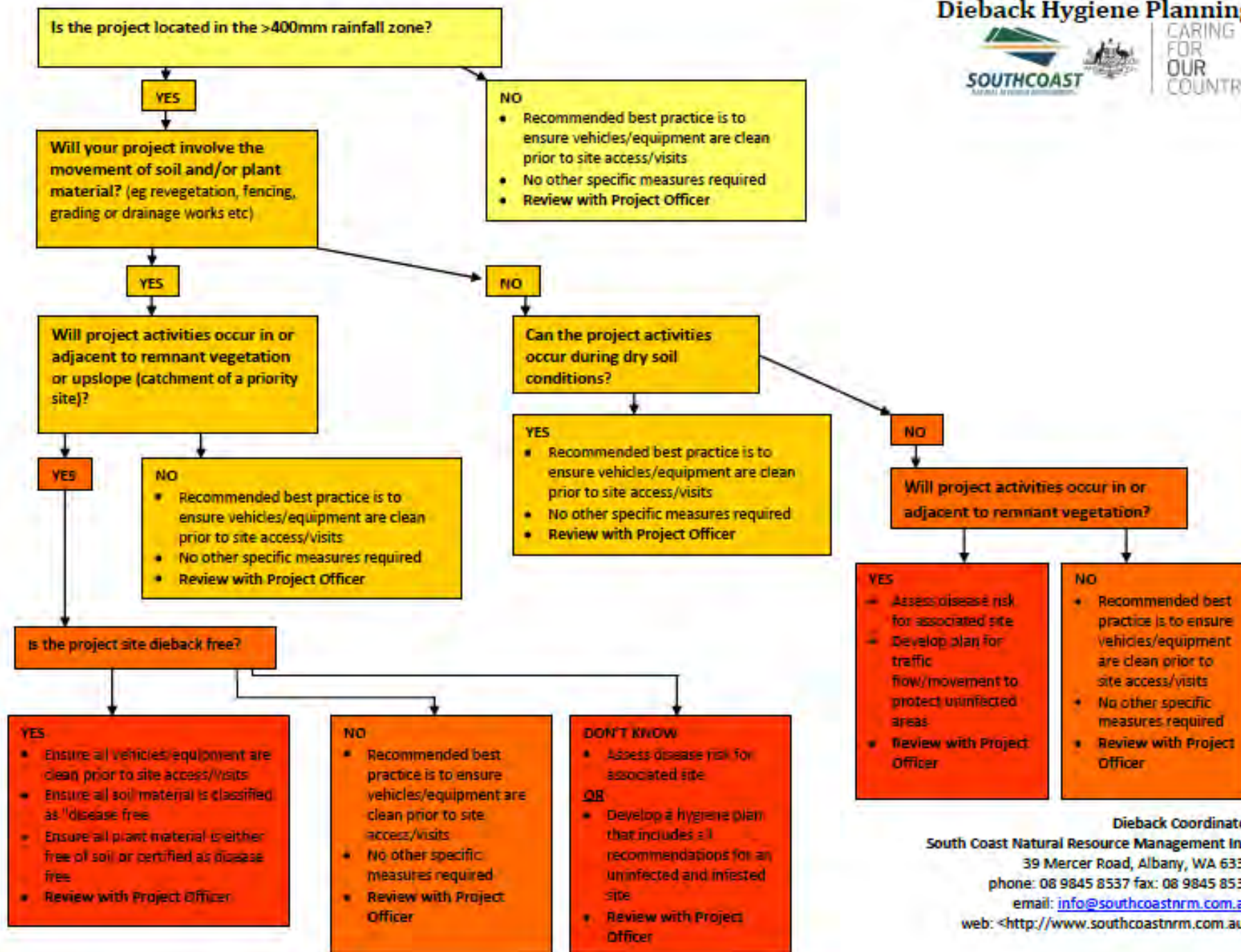
The screenshot shows a web browser window displaying the login page for the DIDMS Project Dieback Online GIS Tool. The browser's address bar shows the URL: <https://didms.galaresources.com.au/accounts/login/?next=/>. The page features the Project Dieback logo on the left, which includes a stylized horse head and the text "Project DIEBACK NATURAL RESOURCE MANAGEMENT WESTERN AUSTRALIA". On the right, the text "DIDMS Dieback Information Delivery and Management System" is displayed, along with logos for GAIA RESOURCES, SOUTHCOAST, and another organization. A navigation bar at the top contains "Home", "Help", and "Sign In" links. The main content area includes a welcome message: "Welcome to the DIDMS Project Dieback Online GIS Tool. This tool provides South Coast NRM Inc. and partner organisations with a consistent and user friendly mechanism to record, store, share and map Dieback work across the region using standardised data capture methodology. To use this system you must first sign in. Accounts can be applied for from the Project Dieback offices by [contacting our offices.](#)" Below this is a login form with fields for "Username:" (containing "Robync") and "Password:" (masked with dots). A "Sign in" button is positioned below the password field. At the bottom of the page, there is a link for "Forgot your password?". The Windows taskbar at the bottom shows various application icons and the system clock indicating 11:29 PM on 25/05/2017.

www.dieback.net.au



Project Planning - Dieback





Dieback Coordinator

South Coast Natural Resource Management Inc.

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web: <http://www.southcoastnrm.com.au>

Dieback Hygiene Training

Secure | <https://www.dwg.org.au/green-card>

6. Test PC Speed Imported From IE



Dieback
WORKING GROUP



Pythophthora cinnamomi:
A key Threatening process to Australia's biodiversity
(EPBC Act 1999)

Pc Sporangia- DWG

- Home
- What is Dieback
- Diagnosis
- Treatment
- Green Card**
- About the DWG
- Your Local DWG
- Education
- News
- Training & Workshops

Green Card



Dieback Working Group Inc.
GREEN CARD
Biosecurity Training: Phytophthora Dieback Hygiene

Training Program

The Dieback Working Group Green Card Training™ was developed with the input of the Department of Parks and Wildlife



www.dwg.org.au

Site Assessment - planning

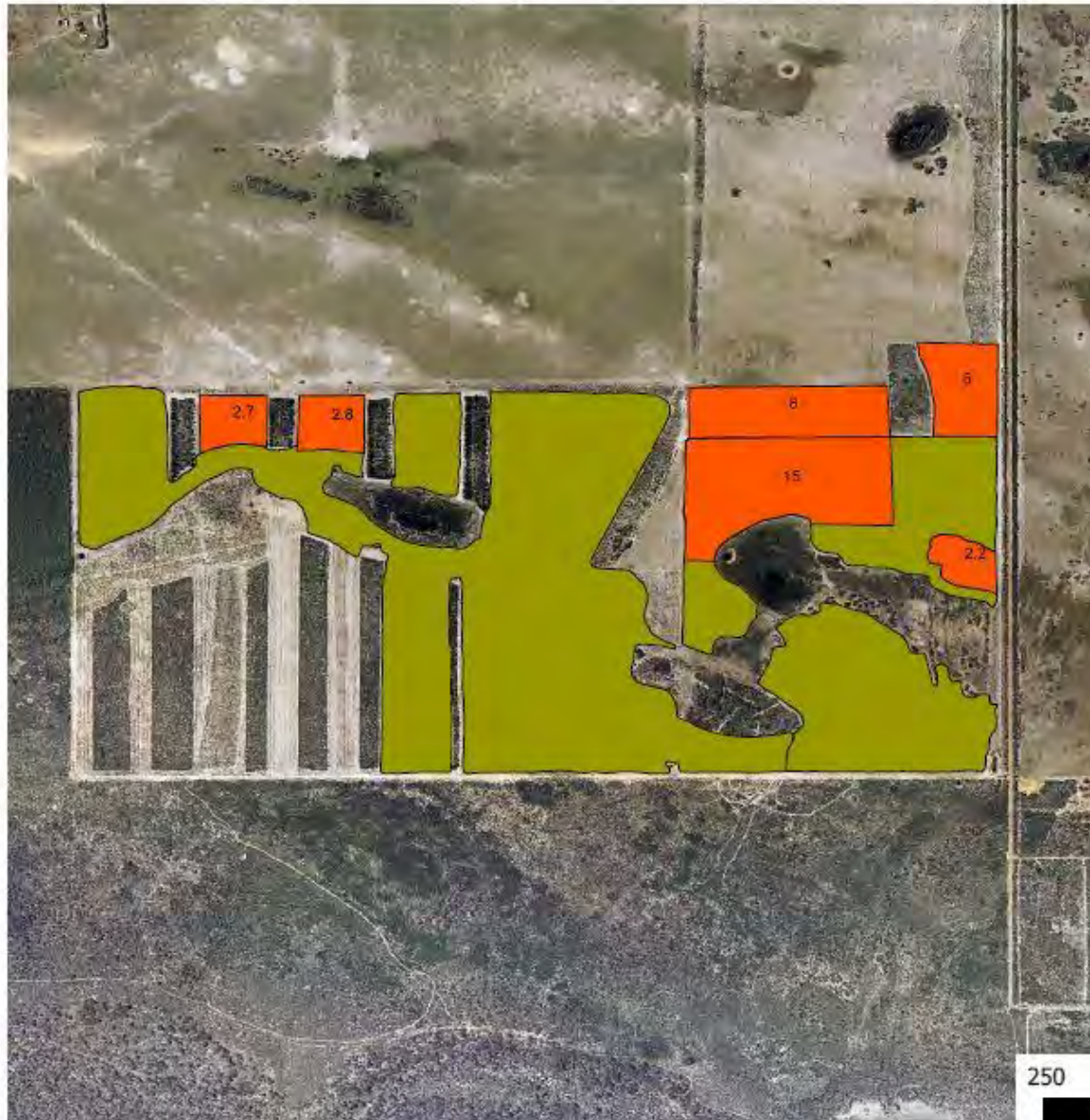
Revegetation Works on 912 Springdale Road

Legend

2015 Direct Seeding

2014 Revegetation Area

Ravensthorpe_2930_Jan_2007_Mosaic



Site Assessment – soil types



Site Assessment - species



Direct Seeding Training – Geoff Woodall



Old Seeder



Modified Seeder – Geoff Woodall



Site Preparation



Seed Treatment: Sorting



Seed Treatment: Hot Water



Seed Treatment: Hot Water



Seed Treatment: Smoke



Seed Treatment: Smoke



Seed Treatment: Smoke



Seed Treatment: Smoke & Storage



Seed bulking & batching

	B	C	D	E	F	G	H	I	J	K	L	M
1												
2	Species		Treatment	Sowing Depth	Species mix	Weight (kg) Supplied	Comments		Species		Weight (kg)	Bulked Volume (L)
3												
4	Acacia								Bin 1		SD = Shallow, Soil = Sand	
5		curvata	hwt	D	S	0.25			Allocasaurina	humilis	5	
6		cyclops	hwt	D	S	2			Alyogyne	heugelii	2	
7		nigricans	hwt	D	S	1			Calothamnus	gracilis	4.5	
8		saligna	hwt	D	T/S	1			Eucalyptus	incrassata	3.5	
9		subcaerulea	hwt	D	S	1.5			Patersonia	occidentalis	1.5	
10		cochlearis	hwt	D	S	1					16.5	80
11												
12	Agrostocrinum								Bin 2		SD = Shallow, Soil = Sand	
13		scabrum	smoke	S	S	0.25			Eucalyptus	falcata	1.5	
14									Goodenia	scapigera	1	
15	Allocasaurina								Meeboldina	scariosa	0.35	
16		humilis	smoke	S	S	5	Keep Dry!		Melaleuca	pulchella	1.75	
17		thymoides	smoke	S	S	1			Melaleuca	striata	7.5	
18									Melaleuca	thymoides	2.1	
19	Alyogyne								Taxandria	spathulata	1.75	
20		heugelii	smoke	S	S	2					15.95	65
21												
22	Anigozanthus											

- Ingredients for seed batch per hectare: 0.8 – 2kg seed, 4kg bentonite clay, 1.25kg wetting agent, 3kg fertiliser, vermiculite & spongolite to bulk to desired volumes



Seeder training



Direct Seeding



Revegetation with seedlings



Direct Seeding Operational Manual

Direct Seeding Machine Operating Manual



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Acknowledgements:

Purchase and modification of this direct seeding machine by South Coast Natural Resource Management (NRM) was made possible with funds from the Australian Government (Biodiversity Fund Project BFCC-1029). Modifications to upgrade the second hand Kimseed Direct Seeder machine was completed by Geoff Woodall. Technical support also provided by Geoff Woodall.

This 'Direct Seeding Machine Operating Manual' was written and compiled by Sean Hazelden, South Coast NRM; formatting/editing by Robyn Cail, South Coast NRM. © August 2015. Photo's throughout document by Sean Hazelden; Cover page and Seed Treatment photo's by Robyn Cail.

Queries regarding this South Coast NRM Direct Seeding machine to dylang@southcoastnrm.com.au or robync@southcoastnrm.com.au www.southcoastnrm.com.au

Pest Control



Monitoring



Monitoring



Insect Control



Monitoring



Success !























Before



After – Success !



Reveg and Remnant bush



After – Success !



Acknowledgements



Thanks to:

- Geoff Woodall, Native Plant Agronomist, for his invaluable technical expertise and support
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