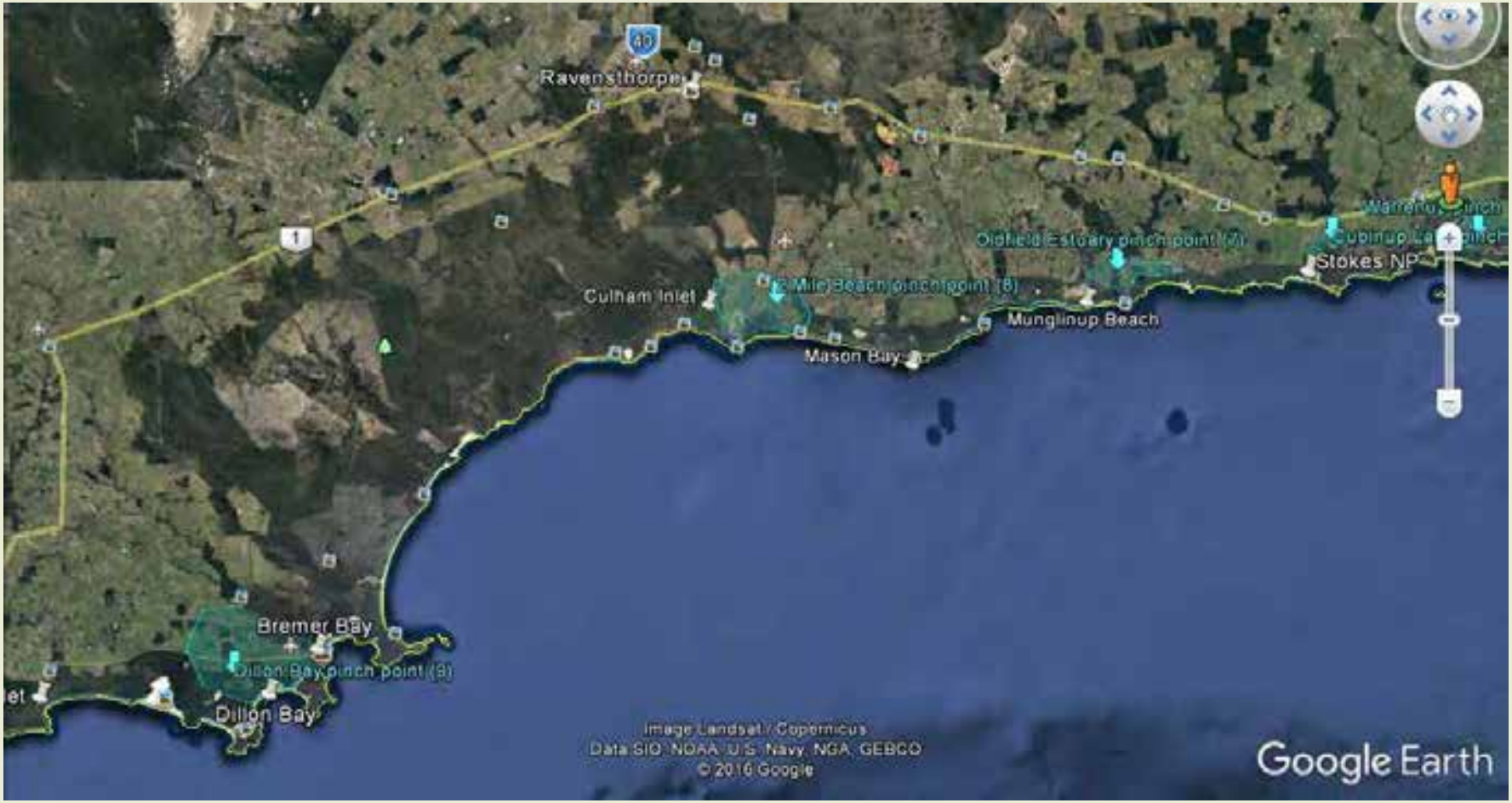
Successful biodiverse seeding in deep...deep...deep sands!

Robyn Cail, South Coast Natural Resource Management

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.

SOUTHCOAST
NATURAL RESOURCE MANAGEMENT

Compiled by Wendy Bradshaw and Robyn Cail

September 2012

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Project Planning - Dieback

www.dieback.net.au

Apps 6. Test PC Speed Imported From IE

Project DIEBACK
NATURAL RESOURCE MANAGEMENT
WESTERN AUSTRALIA

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.

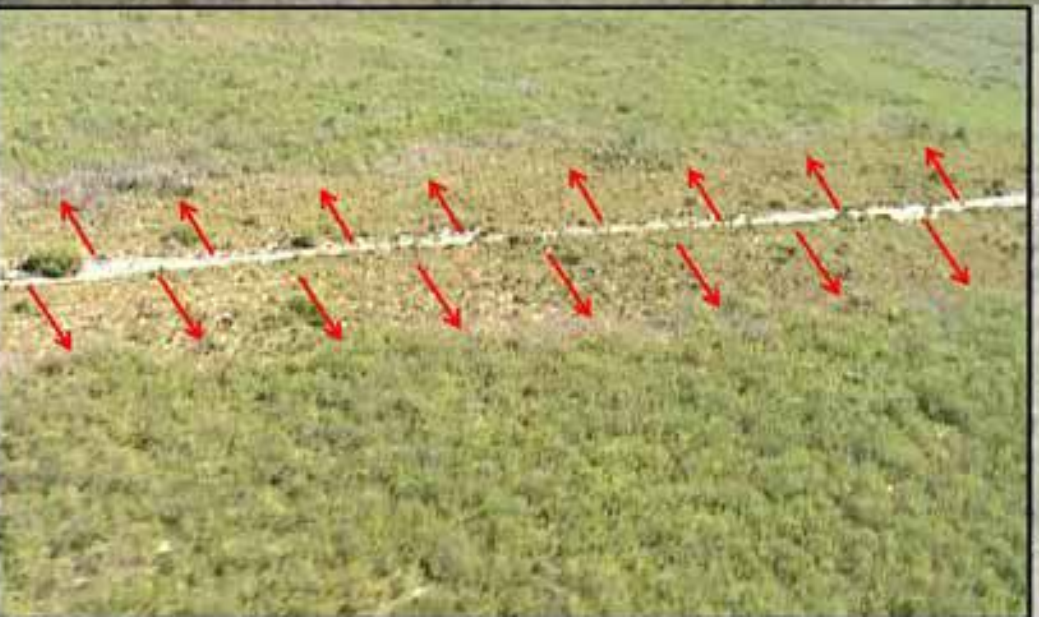
Phytophthora dieback lives in soil and attacks the roots of many native plants. It also

www.dieback.net.au

… before Dieback

… after Dieback

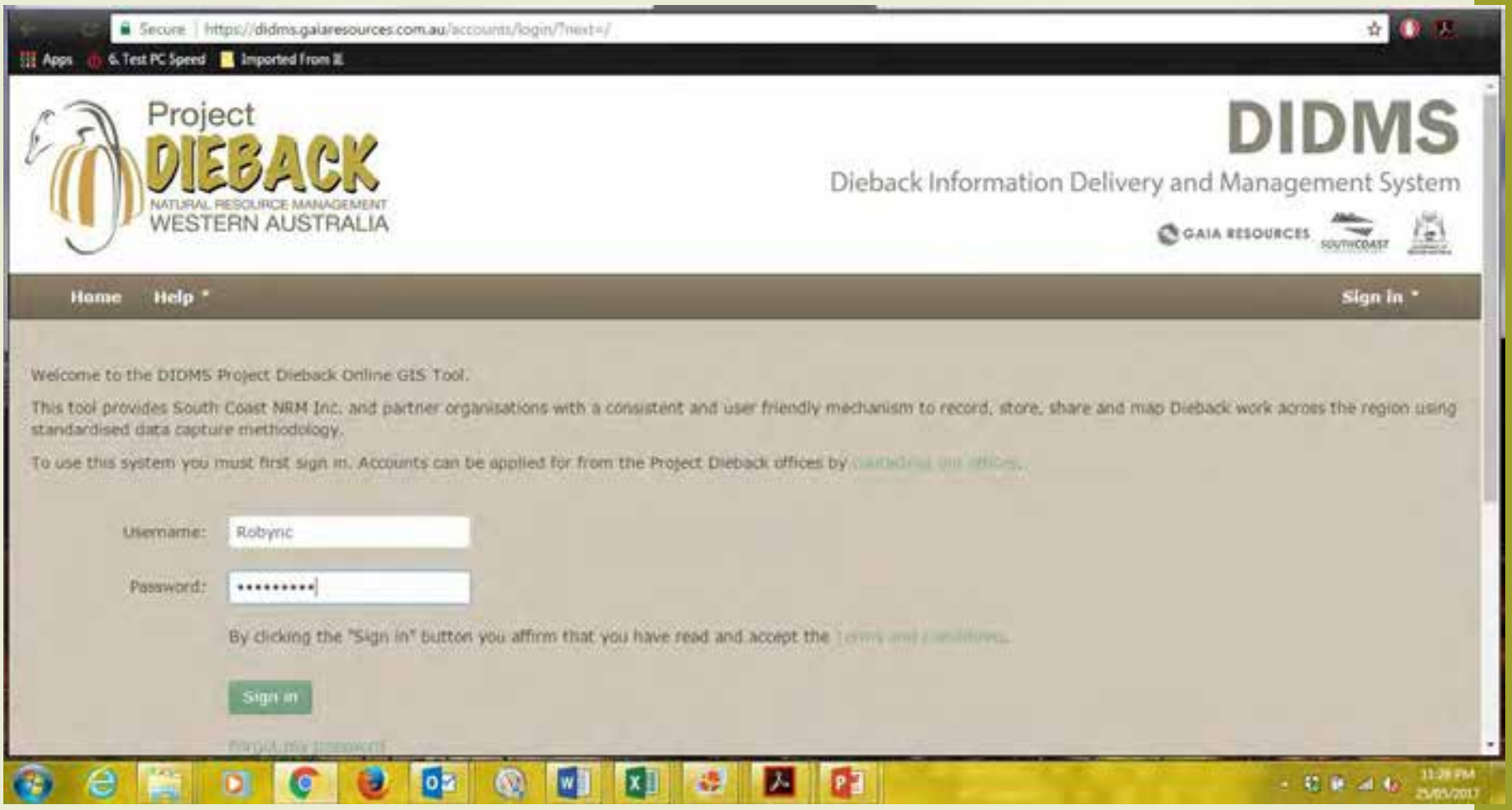
What does an active dieback front look like in the bush?



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

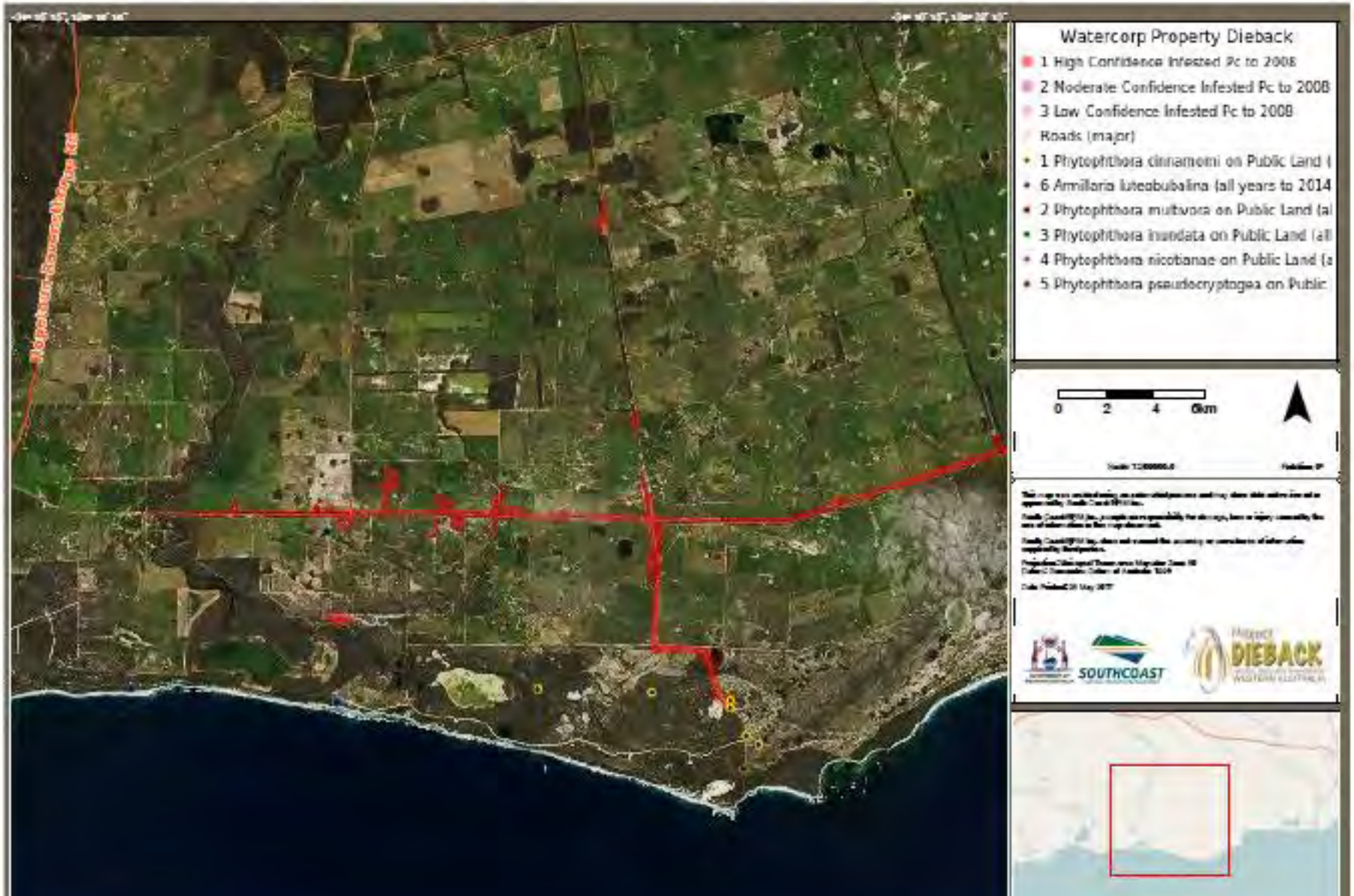
- a **major disruption** of **community structure**
- possible **extinction** of populations of some plant species
- a massive **reduction** in **primary productivity**
- significant **habitat loss and degradation** for dependent plants and animals

Project Planning - Dieback



www.dieback.net.au

Project Planning - Dieback



Dieback Hygiene Planning

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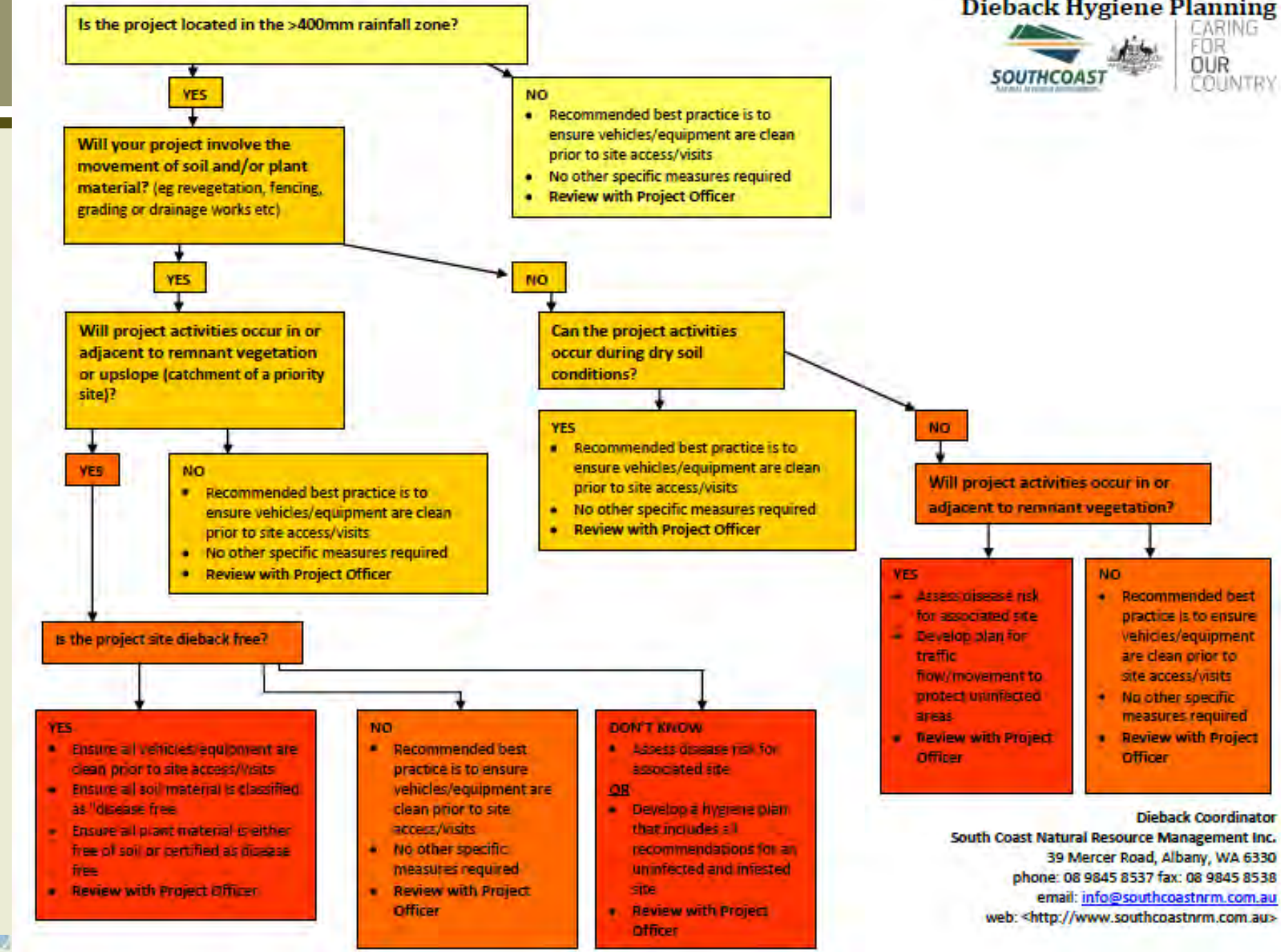

Dieback Coordinator
South Coast Natural Resource Management Inc.
39 Mercer Road, Albany, WA 6330
phone: 08 9845 8537 fax: 08 9845 8538
email: info@southcoastnrm.com.au
web: <http://www.southcoastnrm.com.au>

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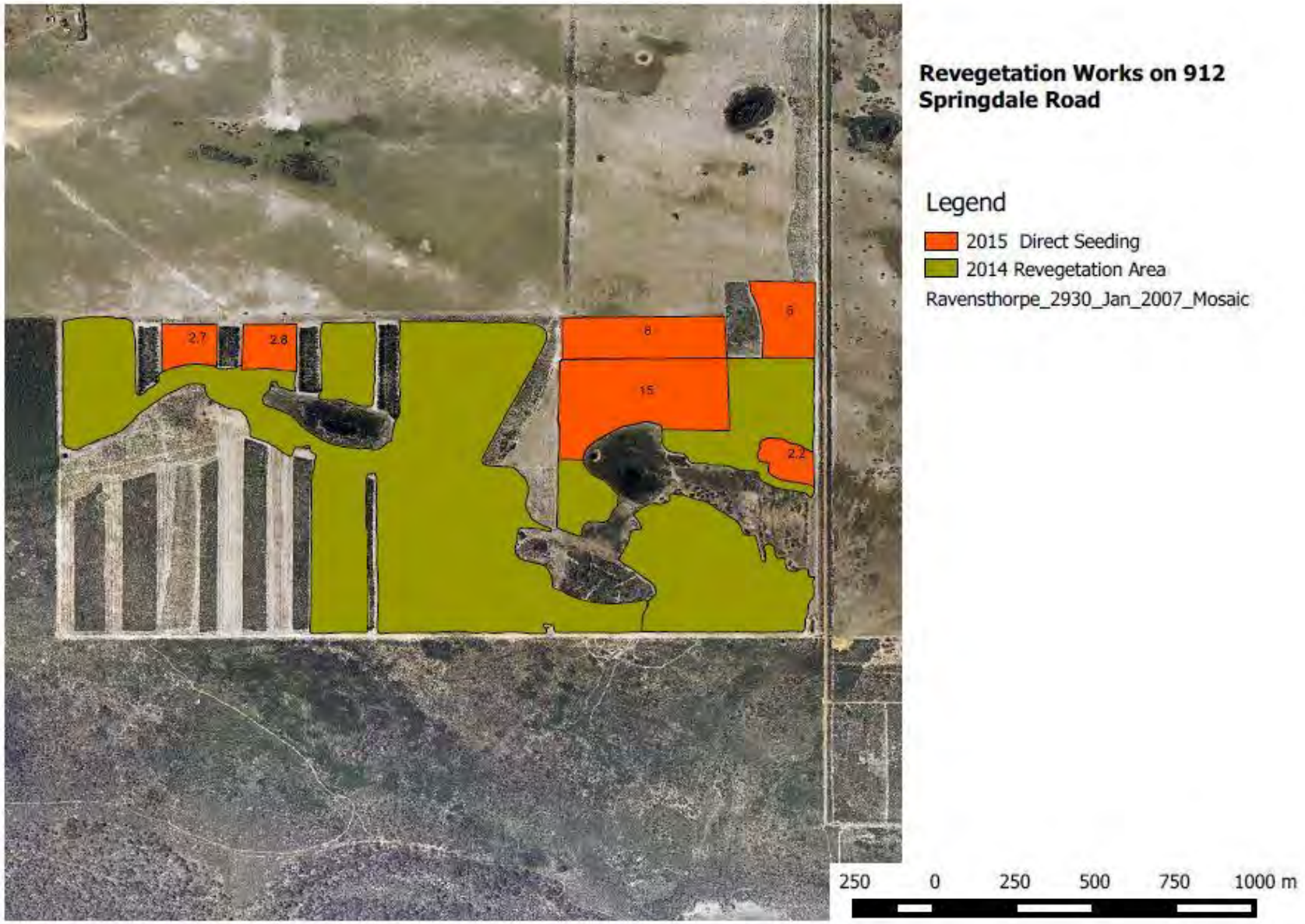
Dieback Hygiene Training

www.dwg.org.au

Site Assessment - planning



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

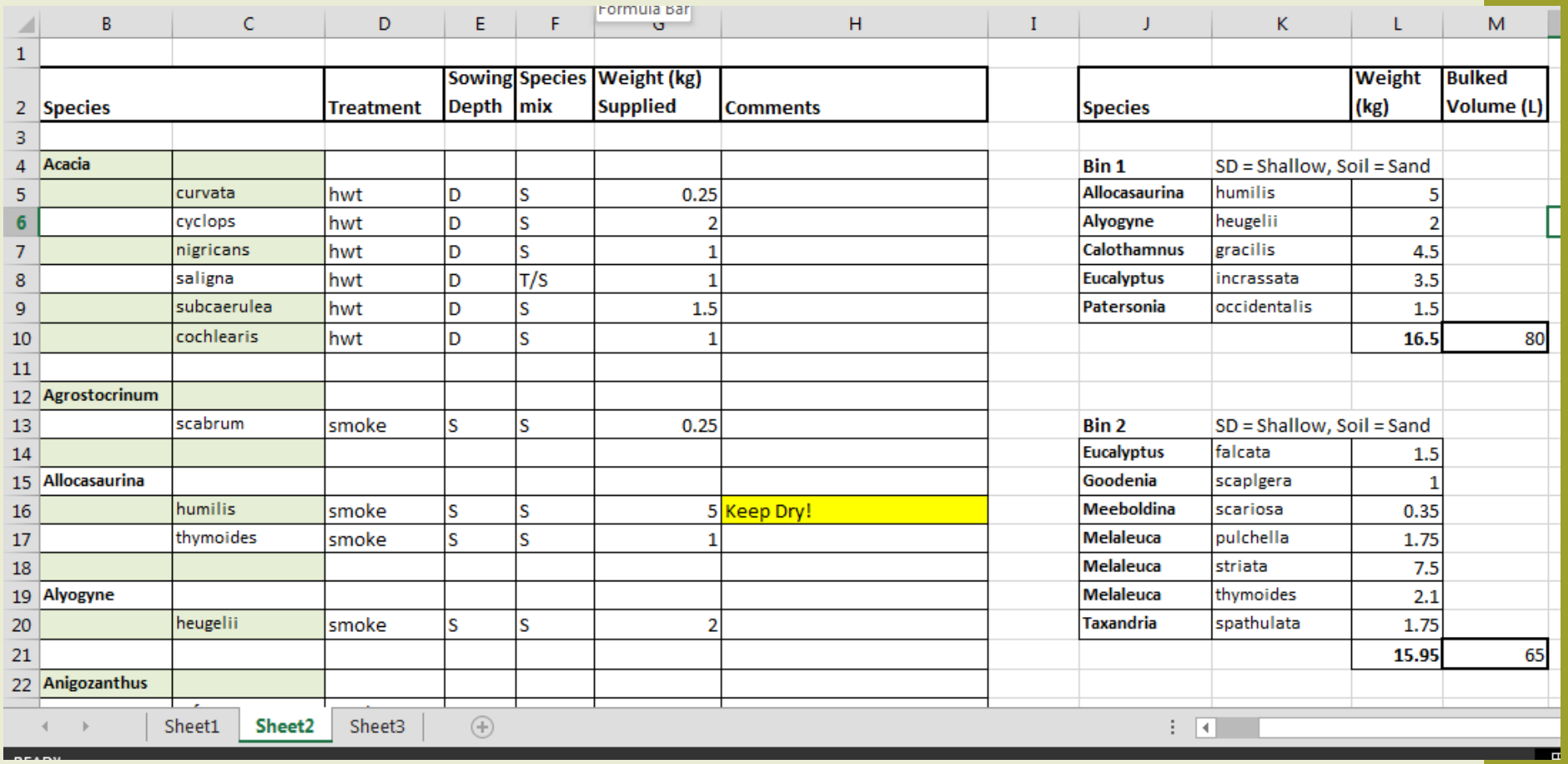
Seed Treatment: Smoke

Seed Treatment: Smoke

Seed Treatment: Smoke

Seed Treatment: Smoke & Storage

Seed bulking & batching



Species		Treatment	Sowing Depth	Species mix	Weight (kg) Supplied	Comments
Acacia						
	curvata	hwt	D	S	0.25	
	cyclops	hwt	D	S	2	
	nigricans	hwt	D	S	1	
	saligna	hwt	D	T/S	1	
	subcaerulea	hwt	D	S	1.5	
	cochlearis	hwt	D	S	1	
Agrostocrinum						
	scabrum	smoke	S	S	0.25	
Allocasaurina						
	humilis	smoke	S	S	5	Keep Dry!
	thymoides	smoke	S	S	1	
Alyogyne						
	heugelii	smoke	S	S	2	
Anigozanthus						

Species		Weight (kg)	Bulked Volume (L)
Bin 1	SD = Shallow, Soil = Sand		
Allocasaurina	humilis	5	
Alyogyne	heugelii	2	
Calothamnus	gracilis	4.5	
Eucalyptus	incrassata	3.5	
Patersonia	occidentalis	1.5	
		16.5	80
Bin 2	SD = Shallow, Soil = Sand		
Eucalyptus	falcata	1.5	
Goodenia	scaplgera	1	
Meeboldina	scariosa	0.35	
Melaleuca	pulchella	1.75	
Melaleuca	striata	7.5	
Melaleuca	thymoides	2.1	
Taxandria	spathulata	1.75	
		15.95	65

- 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

SOUTHCOAST NATURAL RESOURCE MANAGEMENT

Australian Government

Contents

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

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Pest Control

Monitoring

Monitoring

Insect Control

Monitoring

Success !

Before

After – Success !

Reveg and Remnant bush

After – Success !

Acknowledgements

Thanks to:

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•Dylan Gleave, South Coast NRM

•Australian Government

Further Info:

South Coast NRM
Robyn Cail - 0428717685
robync@southcoastnrm.com.au

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