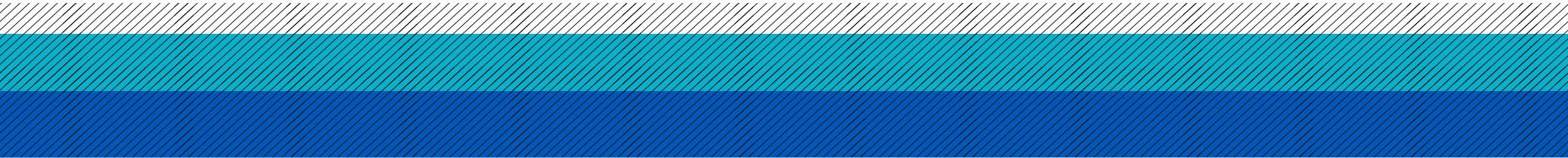


# Legacy Rehabilitation Project – Progress Update

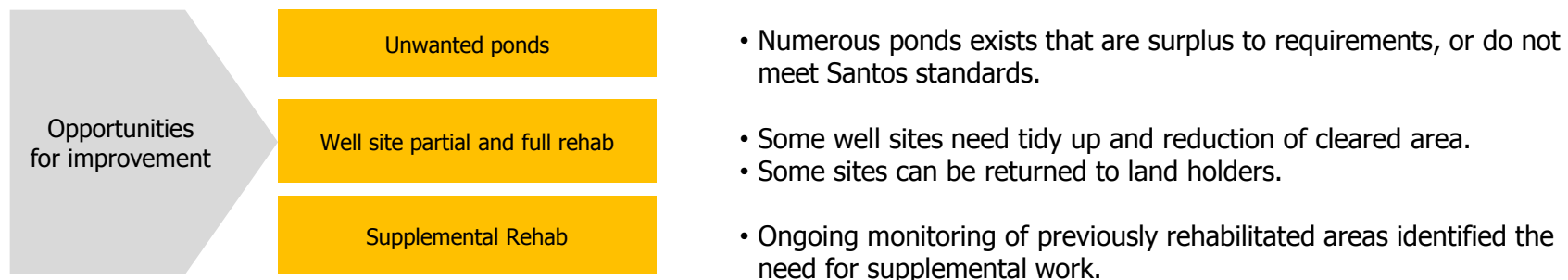
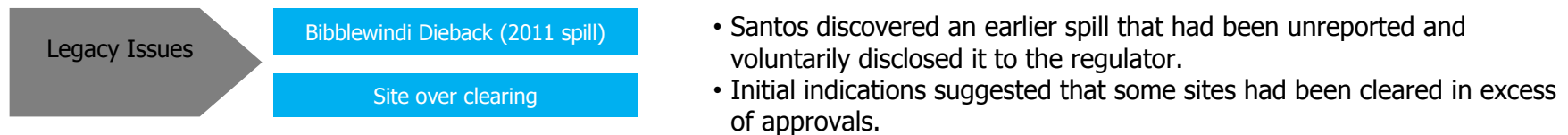
Doug Main – Project Manager, Energy NSW



## Background

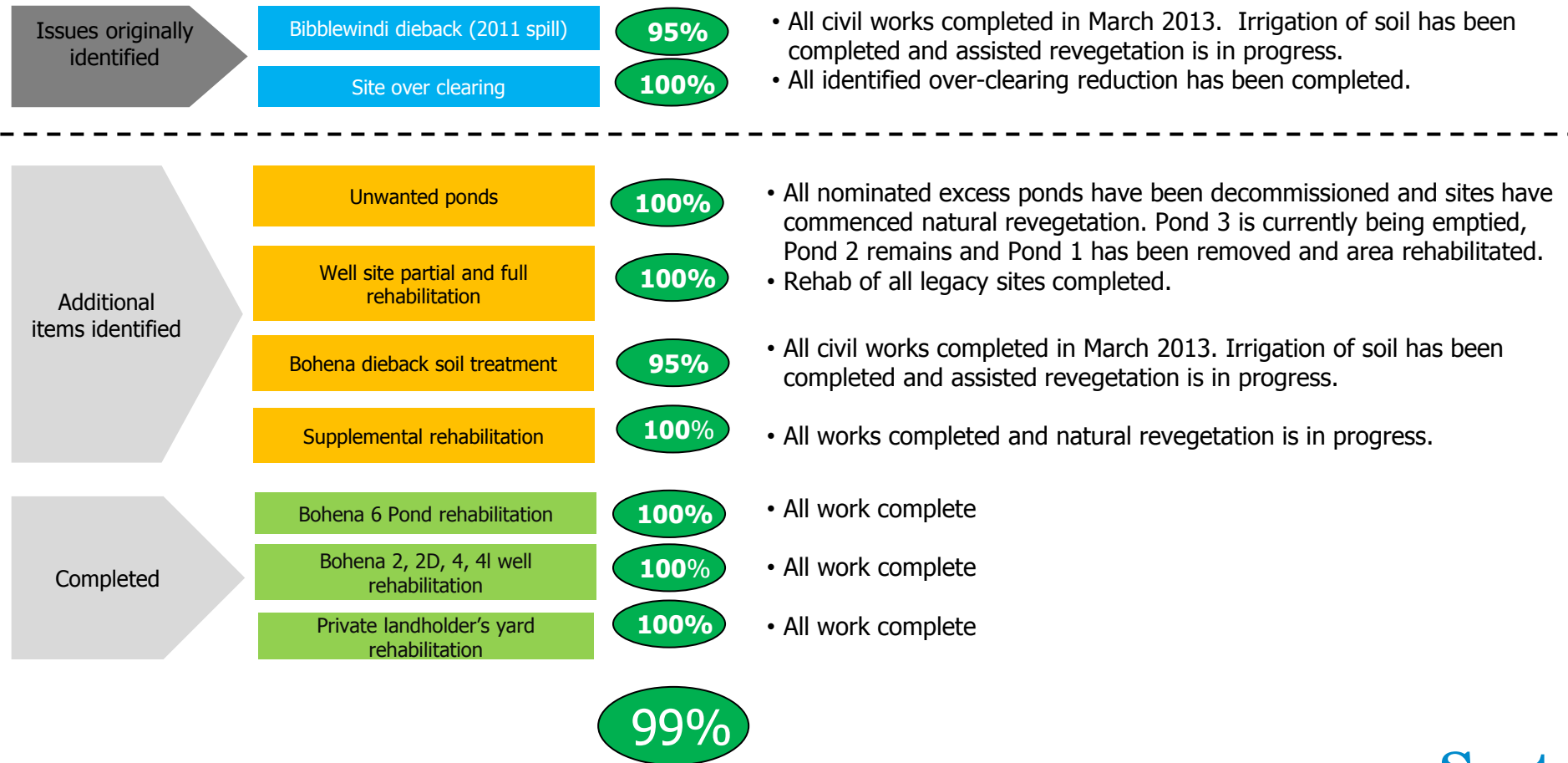
When Santos bought ESG, we found some environmental issues that did not uphold the Santos values:

- *"Cares – by taking the long-term view to build a sustainable future for our company, our people and the environments and communities in which we operate"*
- *"We will lighten the footprint of our activities"*



## Progress Summary

Scope has grown over time, but some quick wins have been achieved and significant progress made on planning and procurement. All civil works have been completed.



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## Progress Summary

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In the last eighteen months:

- More than 40 hectares of land has undergone some kind of rehabilitation
- Emptying, backfill and soil treatment of five ponds, ten sumps and nine flare pits (24 in total) has been completed
- 42 individual sites/leases have undergone/commenced some form of rehabilitation (eight x full rehabilitation, 28 partial, six x dieback)
- Approximately 3,000 tonnes of solid waste disposed of to licenced landfill

Rehabilitation close-out approach has been agreed with DRE and FCNSW. Close-out will occur when revegetation has become self-sustaining

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## Rehabilitation Process

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It takes considerable time and has various stages.

- › Detailed studies of the existing site and historical practices
- › Development of rehabilitation plans and analytical testing
- › Regulatory review of the scope of work for each site
- › Procurement of contractors
- › Execution of work
- › Validation of work conducted
- › Close-out





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## Bohena 3

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Before – 26 April 2012



After – 20 Nov 2012



Rehabilitation began at Bohena 3 in October 2012

Civil work completed 23 November 2012

11 June 2014





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## Bohena 6

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Before – 26 April 2012



After – 31 January 2013



Initial rehabilitation was conducted at Bohena 6 in Q2 2012

Civil work completed in January 2013



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## Bohena South

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Before - 14 March 2012



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During – 22 November 2012



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Bohena South

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11 June 2014

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## Dewhurst 8 Pond

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Before - 21 January 2012



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During – 30 January 2013



The Dewhurst ponds and sumps were located on private land and have been decommissioned according to landholder requests

Civil works completed on 1 February 2013



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Dewhurst 8 Pond

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11 June 2014

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## Lease Site Rehabilitation – Bohena 5

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Before – 5 September 2012



Well head decommissioning was completed in August 2012

Site rehabilitation works completed in December 2012

After – 22 January 2013





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## Lease Site Partial Rehabilitation Dewhurst 13

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Before – 17 July 2012



Work commenced 7 November 2012

Work completed 1 February 2013

After – 13 March 2013





## Lease Site Partial Rehabilitation Dewhurst 16

Before



28 November 2012

After



13 March 2013

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## Lease Site Partial Rehabilitation Bibblewindi 13

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### Before



26 May 2012

### During



30 October 2012

### After



13 March 2013

Rehabilitation activities began at Bibblewindi 13 on 8 October 2012

Work concluded on 8 November 2012



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## Dieback Area Remediation

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Biblewindi – after civil works

27 March 2013



Biblewindi – 11 June 2014



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## Dieback Area Remediation

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Bohena 7 – after civil works  
23 February 2013



Bohena 7 – 11 June 2014

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## Dieback Area Remediation

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Using the results of extensive trials and testing, dieback areas are treated as follows:

- ✓ • Removal of dead vegetation (safety concerns) – used later for soil stabilisation and to create habitat
- ✓ • Removal of heavily impacted soil
- ✓ • Earthworks to improve drainage and site contours
- ✓ • In-situ chemical treatment of impacted and affected soils (gypsum and sulphur)
- ✓ • Respread retained topsoil
- ✓ • Addition of organics to soil
- ✓ • Respread retained timber
- ✓ • Irrigation of soil to assist chemical processes
- ✓ • Assisted revegetation
- ✓ • Ongoing monitoring



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## Future Plans

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- Ongoing monitoring of revegetation
- Partial rehabilitation of new sites
- Transfer of stored water out of the Pilliga
- Continuous improvement – upgrade of sediment and erosion control measures on all remaining sites

