



Dendrobium Community Consultative Committee

15 December 2011



- Environment and Community Update, including piezometer results – Peter McMillan
- Operational Update – Wayne Price
- Update regarding Dendrobium Area 3B SMP – Gary Brassington
- General Business
- Christmas Dinner

Dendrobium Area 3B:

**Developing the
Subsidence Management Plan**



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Illawarra Coal has commenced developing its Subsidence Management Plan for Dendrobium Area 3B

- Legislation
- Key dates
- Conditions for subsidence management
- Groundwater monitoring plan

- 2001 EPBC and EP&A Approval
- 2008 EP&A Modification
- Area 3B SMP Application

Target dates:

December 2011: Specialists reports due;
AHIP process starts

February 2012: SMP drafted

March 2012: Draft SMP submitted

April 2012: Government review process commences

Conditions 2, 3 & 5

2. Ensure underground mining operations do not cause subsidence impacts at Sandy Creek and Wongawilli Creek other than minor impacts
3. Ensure development does not result in reduction in quality/quantity of surface water or groundwater inflows (Lake Cordeaux, Lake Avon, Cordeaux River at its confluence with Wongawilli Creek)
5. Ensure that subsidence does not cause erosion of the surface or changes in ecosystem functionality of Swamp 15a (structural integrity of controlling rockbar is maintained or restored)

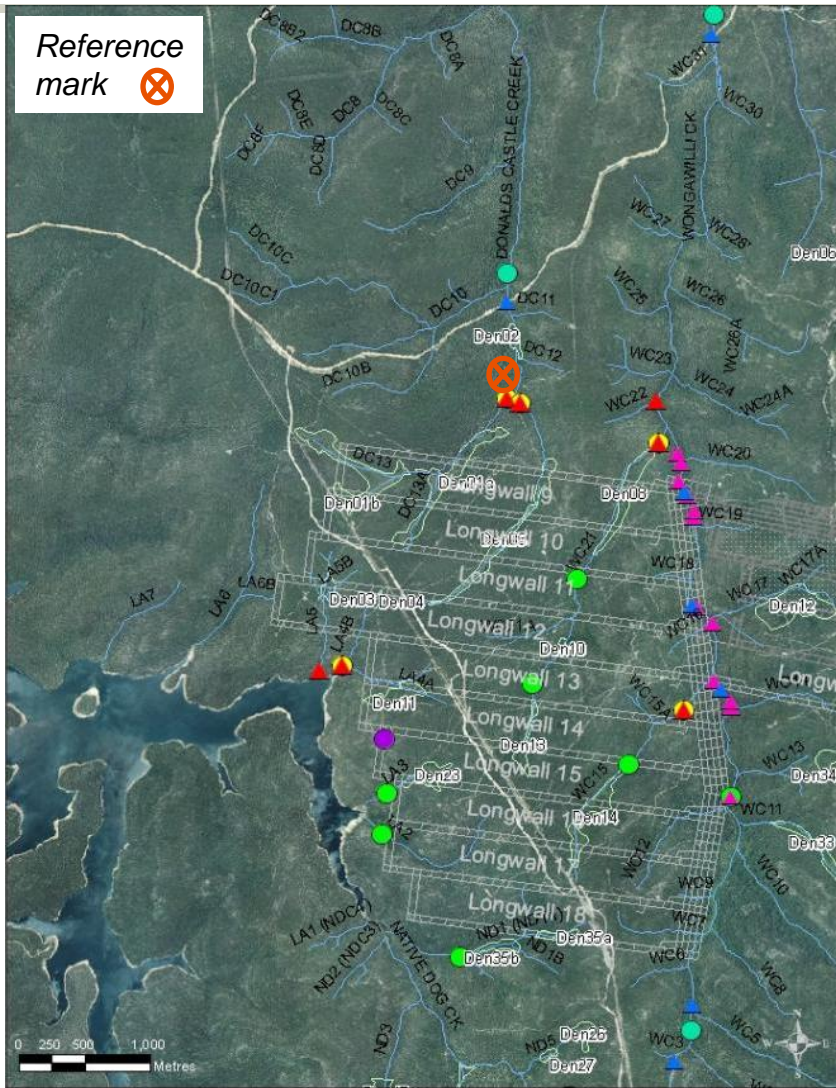
Condition 7 – Subsidence Management Plan

- integrate ongoing management of Dendrobium Areas 1 & 2, Watercourse & Swamp Impact monitoring, and Management & Contingency Plans (Conditions 4 & 6)
- include monitoring of subsidence effects
- SCA Assets Protection Plan
- monitoring, management and contingency plans for all other significant natural features and man made features (incl landscape, groundwater, flora/fauna/ecology, Aboriginal, utilities infrastructure)

Condition 8 – Subsidence Management Plan

- include a mine plan
- detailed subsidence impact assessment
- minimum 2 years baseline data
- identify/assess significance of natural features within 600m of the edge of secondary extraction
- distinguish between, clearly describe and adequately quantify all subsidence effects, subsidence impacts and environmental consequences
- propose limits on subsidence impacts and environmental consequences to be applied within the relevant Area

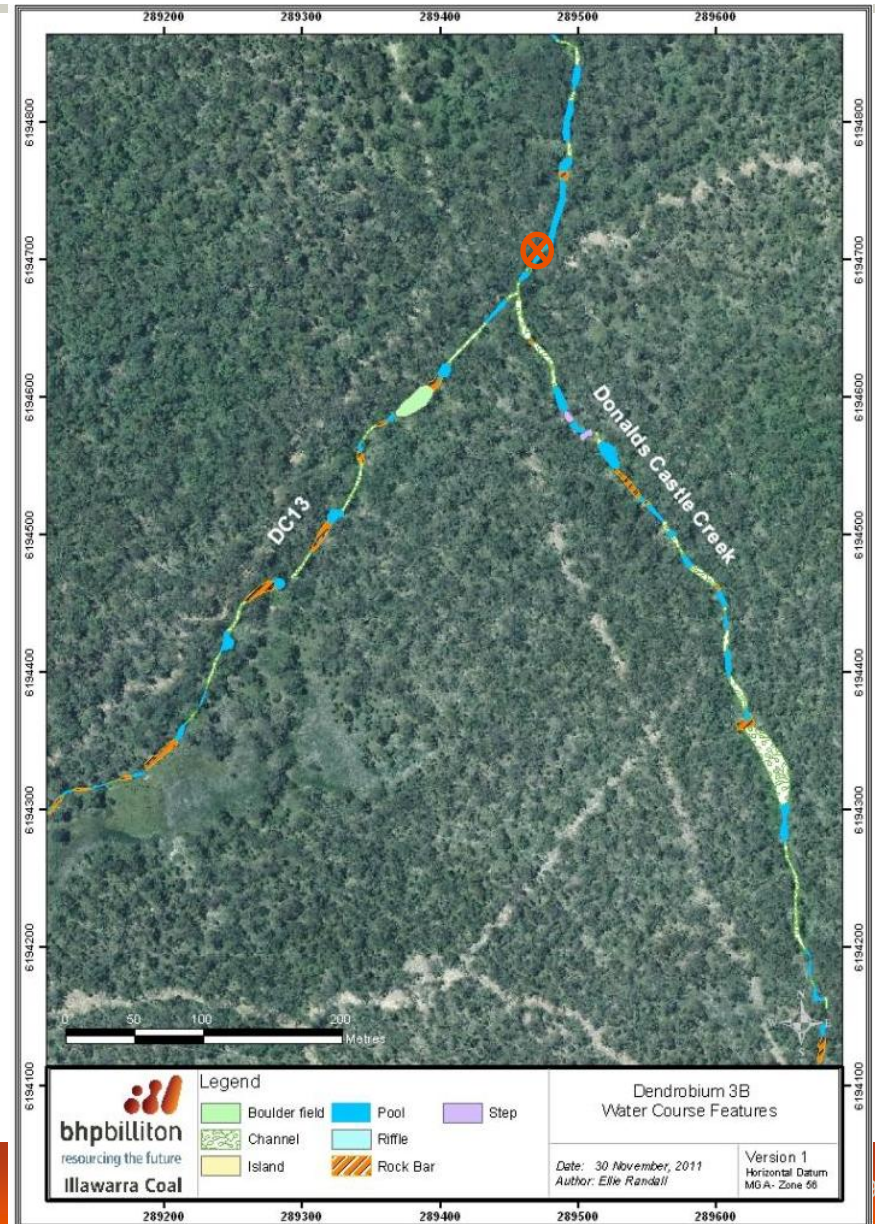
Existing and proposed monitoring sites



Dendrobium 3B Proposed and Existing Monitoring Sites

Proposed Hydrometric Consulting Services Weather Station Site	Existing Ecoengineers Water Quality Sites
Proposed Hydrometric Consulting Services Flow Gauging Sites	Proposed BHP B IC Water Quality Sites
Existing Hydrometric Consulting Services Flow Gauging Sites	Existing BHP B IC Field Parameter Sites
Proposed Ecoengineers Water Quality Sites	

Version 1 Horizontal Datum MG A - Zone 56



Dendrobium 3B Water Course Features

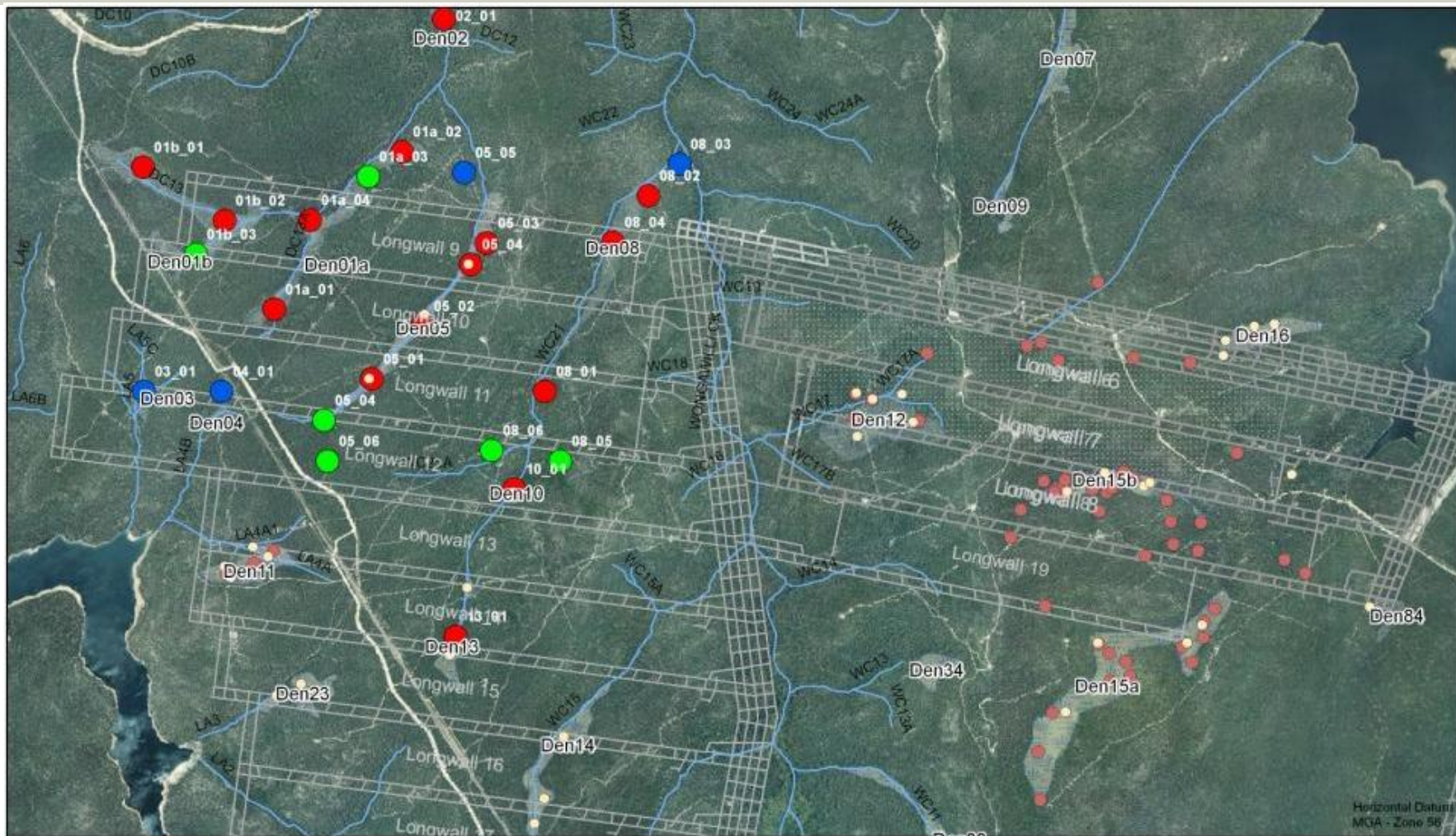
Boulder field	Pool	Step
Channel	Riffle	
Island	Rock Bar	

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Date: 30 November, 2011
Author: Elle Randall

Version 1
Horizontal Datum
MG A - Zone 56

Groundwater monitoring plan (shallow auger holes)





Dendrobium Area 3B Groundwater Monitoring Plan (Shallow Auger Holes)

- Stage 1 proposed shallow piezometers/micro-gophers
- Stage 2 proposed shallow piezometers/micro-gophers
- Stage 3 proposed shallow piezometers/micro-gophers

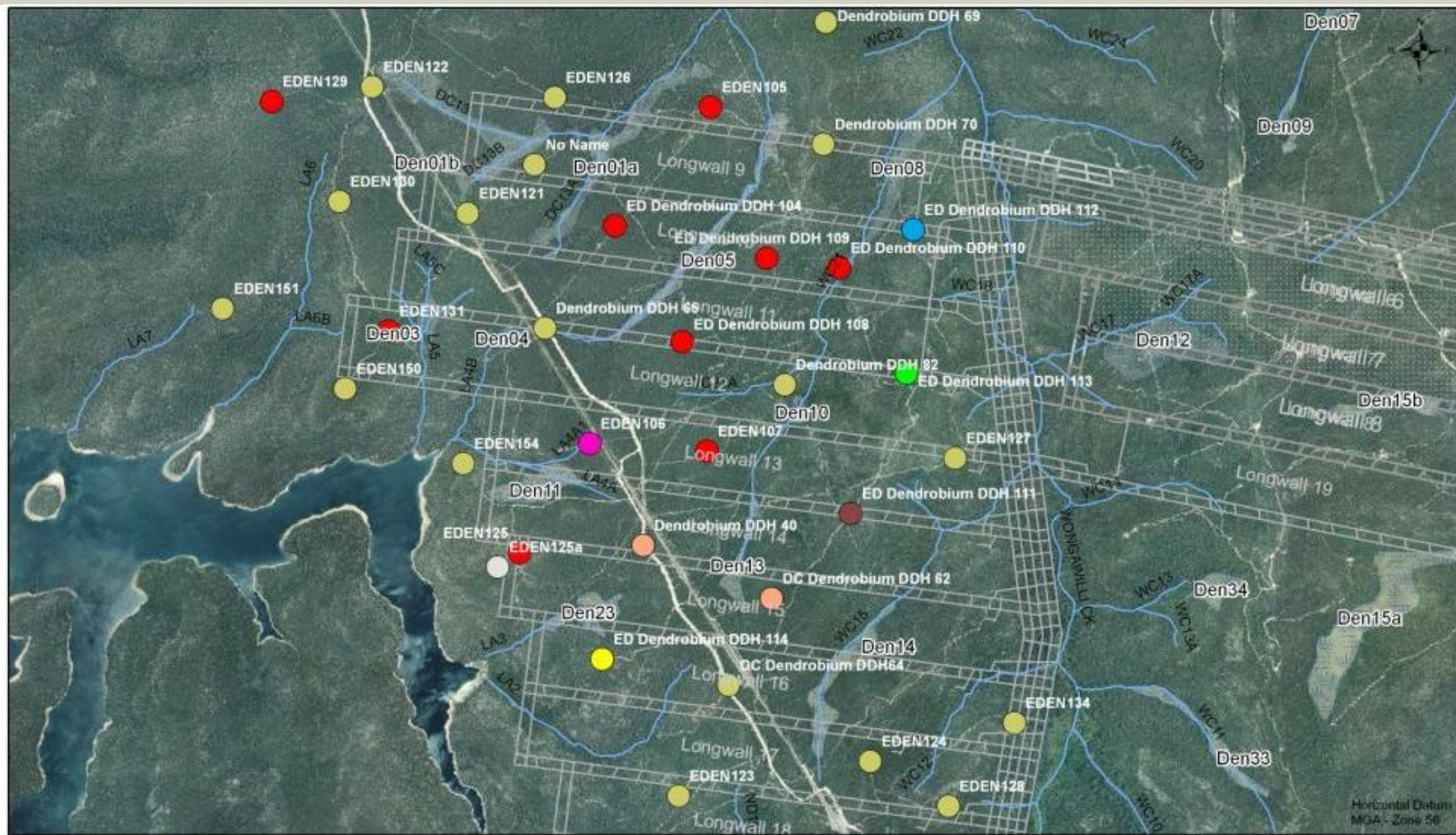
- Existing shallow piezometers
- Existing micro-gophers



Date: 11 November, 2011
Author: D. Gregory



Groundwater monitoring plan (strata)





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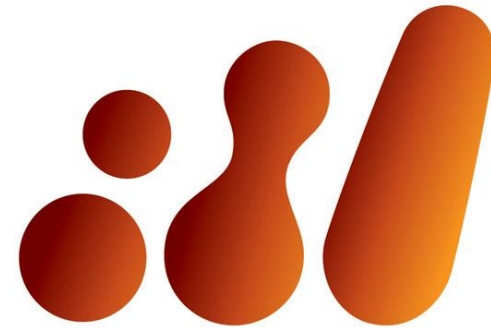
Dendrobium Area 3B Groundwater Monitoring Plan (Strata)

<ul style="list-style-type: none"> ● Piezo in Wonga Seam only ● Piezo in Wonga & Bulli Seam ● Piezo in HSS, Bald, BSS, SSS, Bulli & Wonga ● Piezo in HSS, BSS, SSS, Bulli & Wonga 	<ul style="list-style-type: none"> ● Piezo in HSS, BSS, Womb, Bulli & Wonga ● Piezo in HSS, BSS, SSS, Bulli & Wonga with sample pump HSS & BSS ● Piezo in HSS, BSS, SSS, CCSS & Wonga with sample pump in HSS & BSS ● Piezo in HSS, BSS, Womb, CCSS, Bulli Seam with sample pump in HSS & BSS
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- No piezo with sample pump in HSS & BSS



Date: 11 November, 2011
Author: D. Gregory



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Dendrobium Community Consultative Committee

Illawarra Coal presentation

16 February 2012



- Environment and Community Update, including piezometer results
- Dendrobium Operational Update
- Other operational updates
- General Business

Dendrobium Area 3B:

Update on developing the Subsidence Management Plan



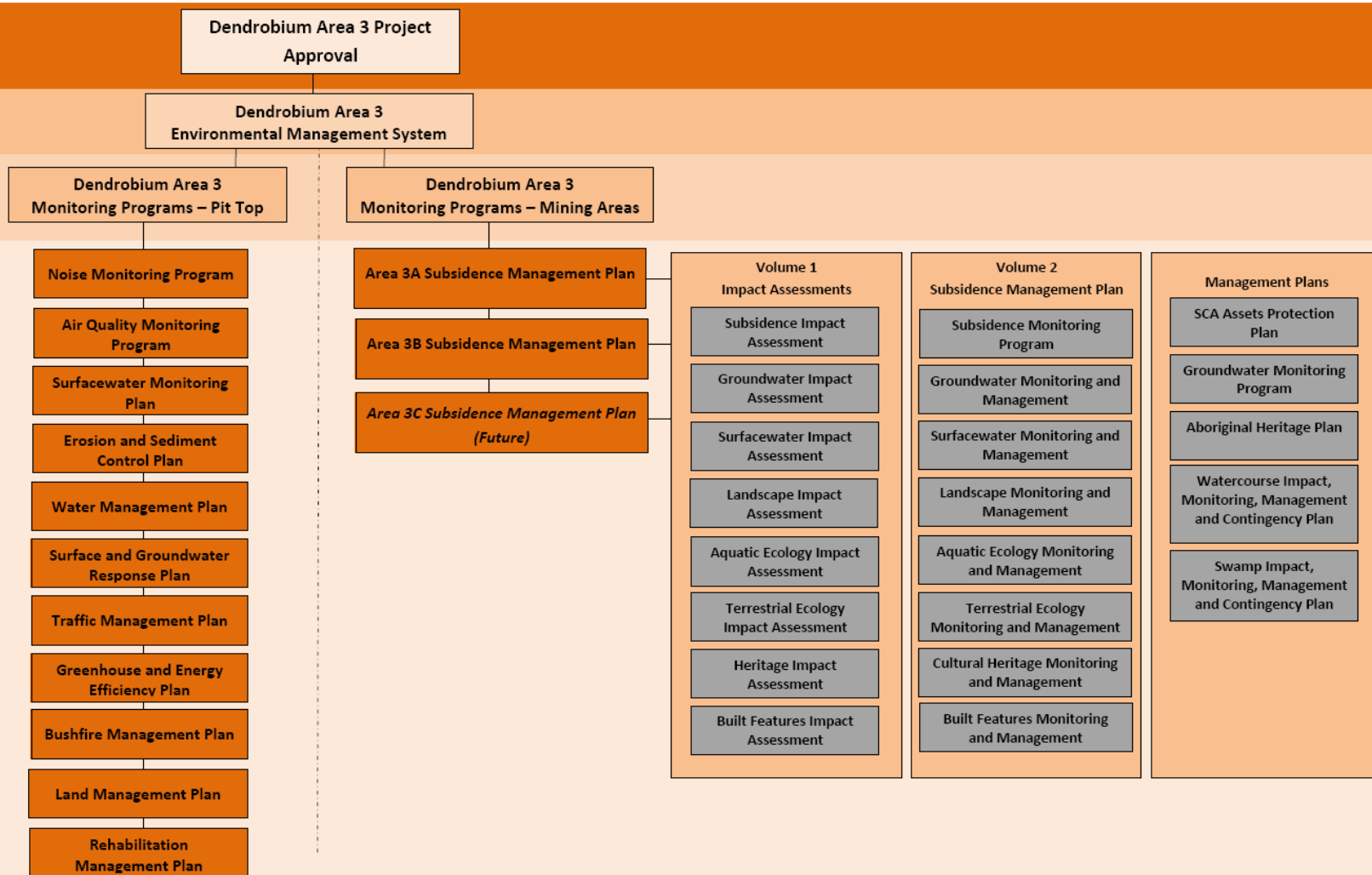
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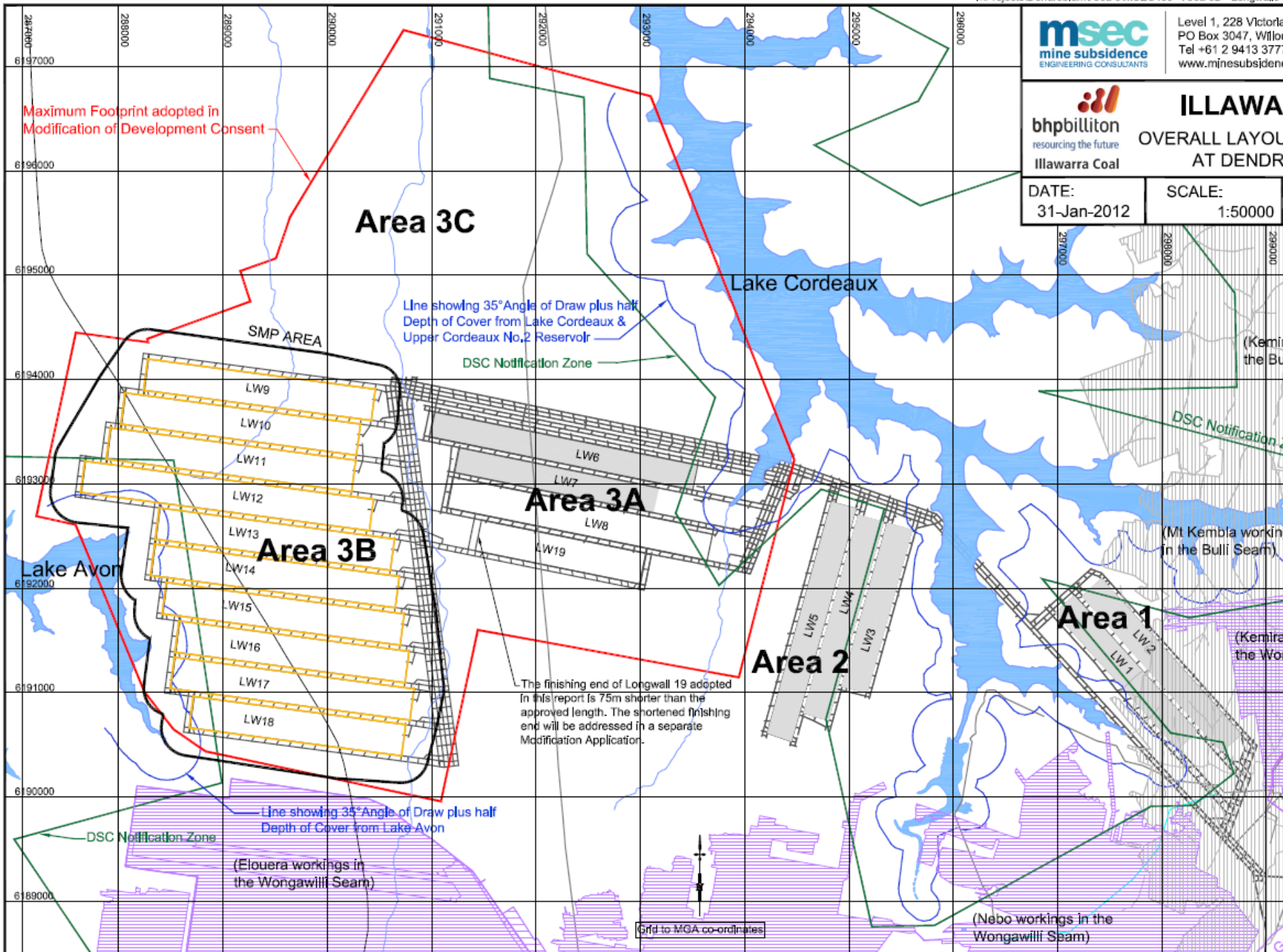
Illawarra Coal has commenced developing its Subsidence Management Plan for Dendrobium Area 3B

- SMP
- Proposed mine plan
- Natural features
- Man made features

- 2001 EPBC and 2008 EP&A Approvals
- Area 3B SMP Application
 - Specialists reports
 - AHIP process
 - Draft SMP
- Monitoring, management and contingency plans
 - All significant natural features
 - Aboriginal heritage and culture
 - Infrastructure

Area 3B SMP





Maximum Footprint adopted in
Modification of Development Consent

Area 3C

Lake Cordeaux

Line showing 35° Angle of Draw plus half
Depth of Cover from Lake Cordeaux &
Upper Cordeaux No.2 Reservoir

DSC Notification Zone

SMP AREA

Area 3B

Area 3A

Lake Avon

DSC Notification Zone

Line showing 35° Angle of Draw plus half
Depth of Cover from Lake Avon

(Elouera workings in
the Wongawilli Seam)

The finishing end of Longwall 19 adopted
in this report is 75m shorter than the
approved length. The shortened finishing
end will be addressed in a separate
Modification Application.

Area 2

Area 1

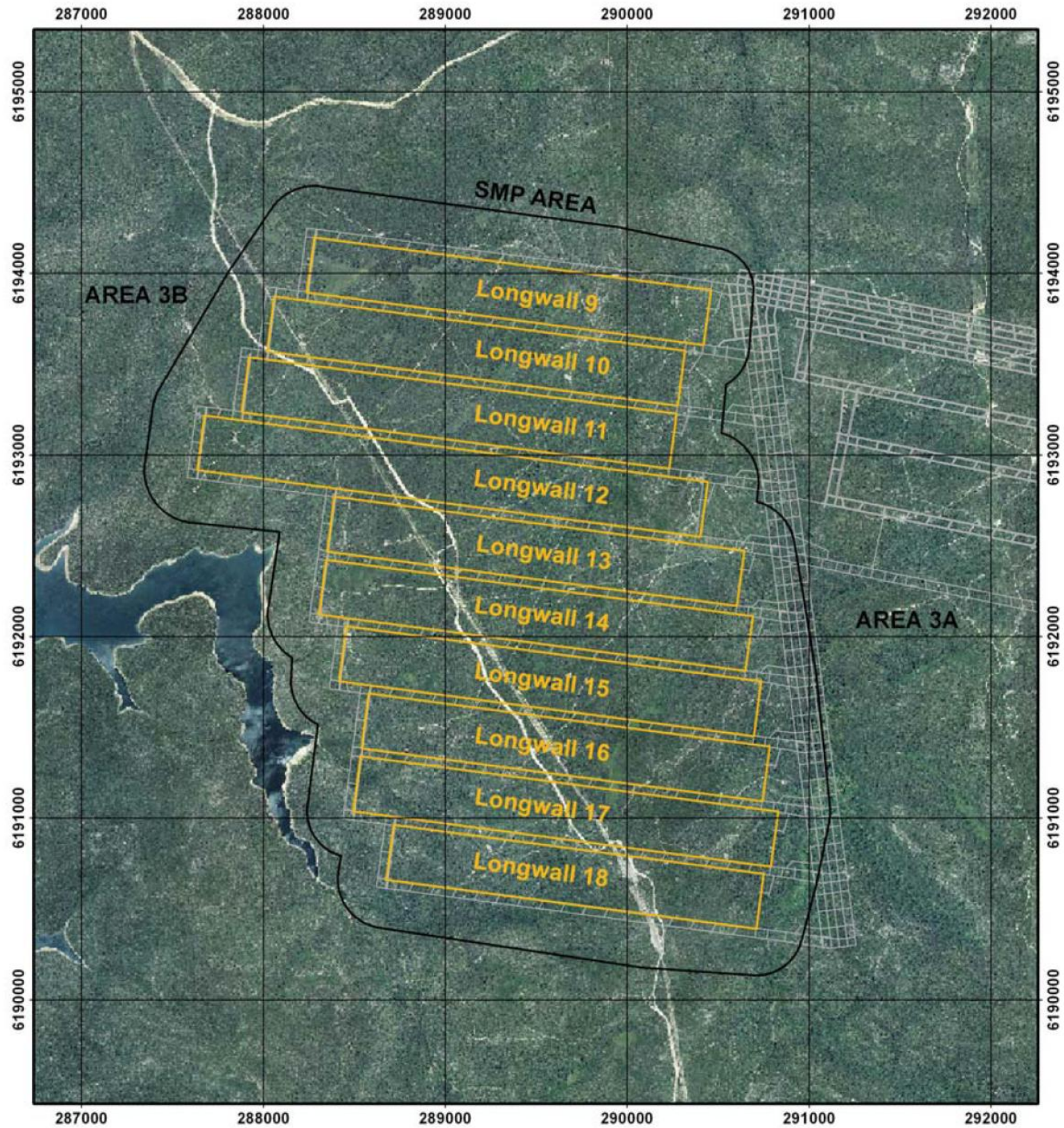
(Mt Kembla workings
in the Bulli Seam)

(Kemira workings
in the Wongawilli Seam)

(Nebo workings in the
Wongawilli Seam)

Grid to MGA co-ordinates

Mine Plan



Natural Features

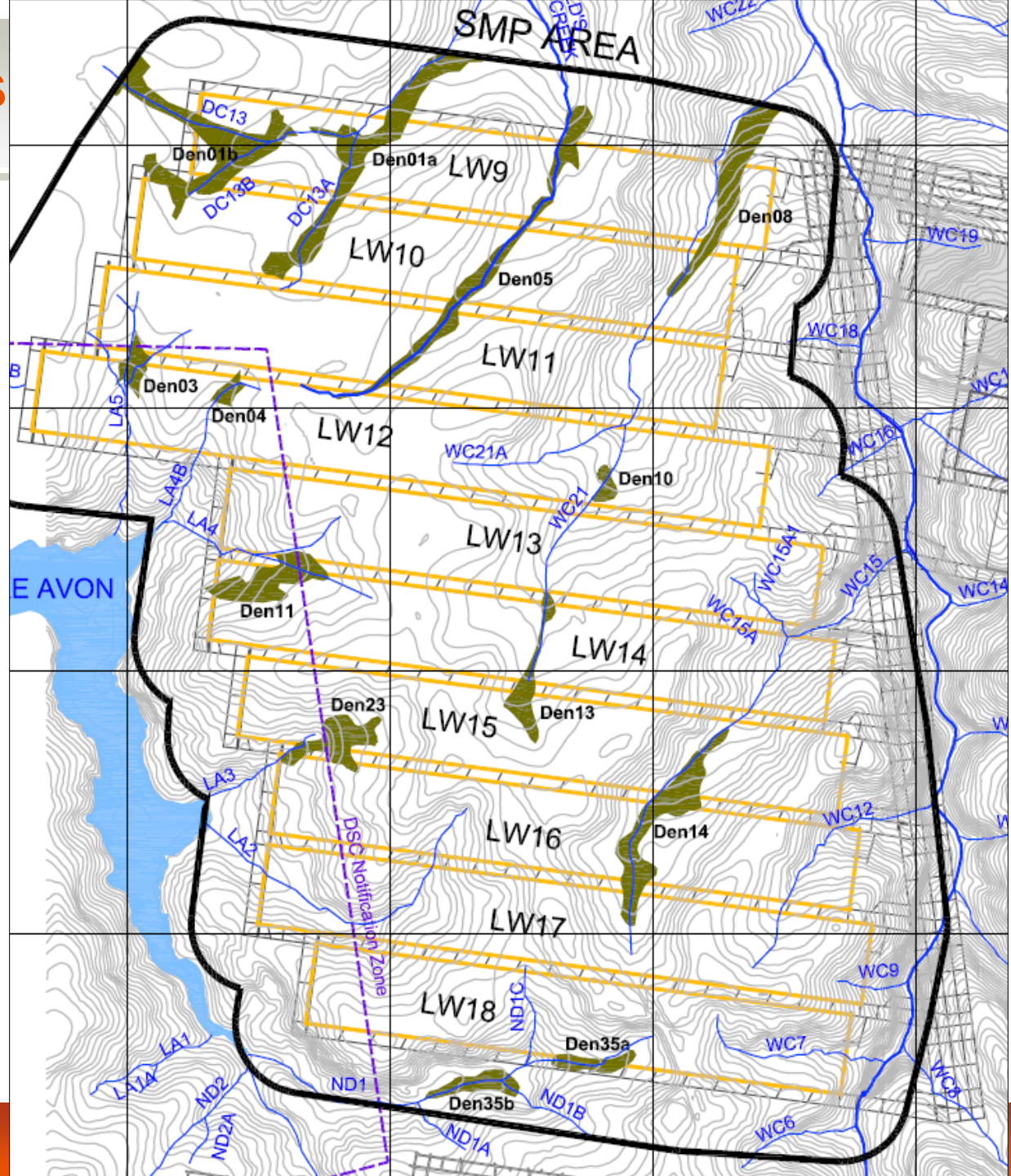




Fig. 5.13 Photographs of Donalds Castle Creek within the Extents of Swamp Den05

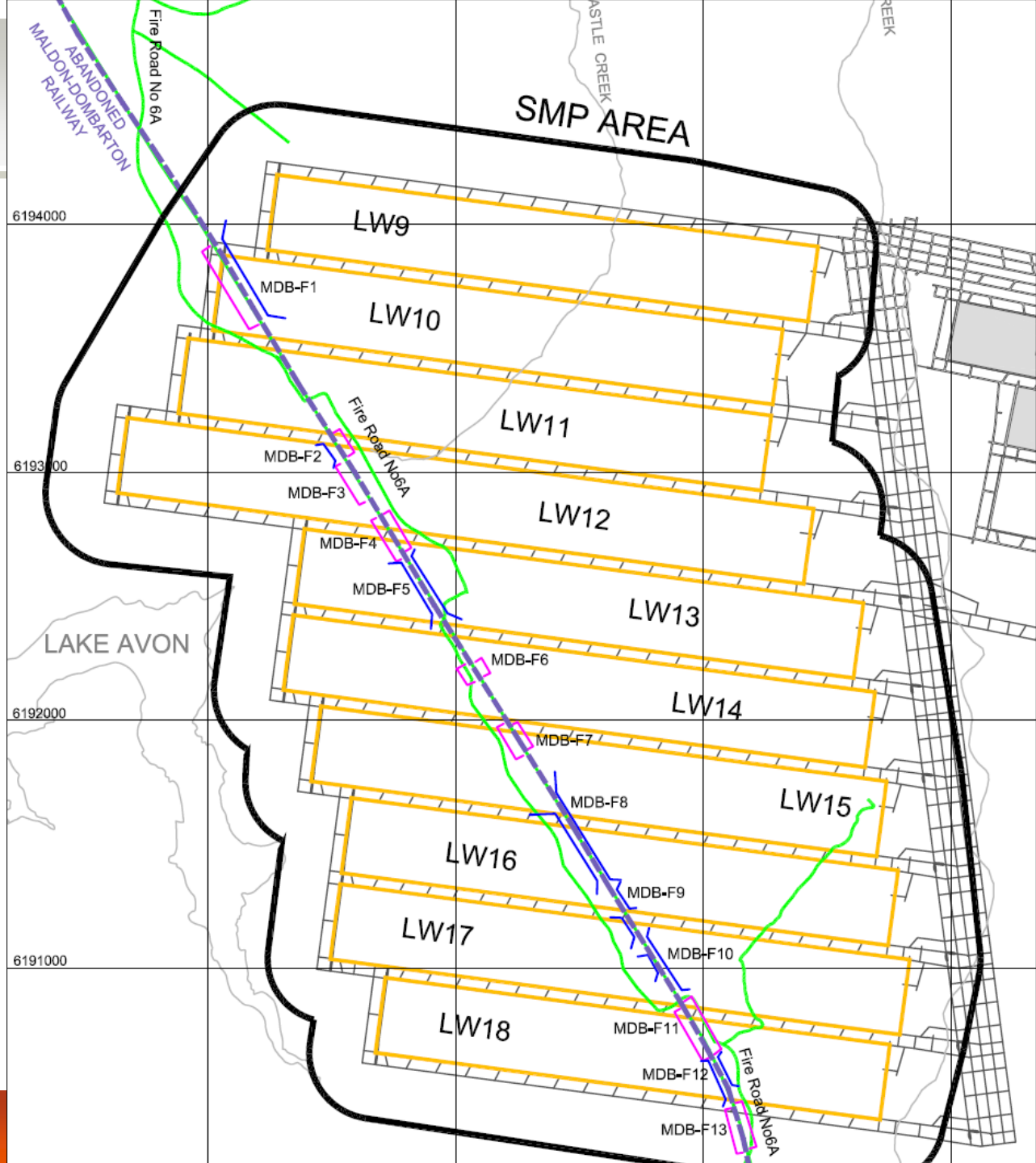


Fig. 5.23 Photographs of Typical Cliffs along Wongawilli Creek (Courtesy of IC)



Fig. 5.27 **Photographs of Swamp Den05 (Valley Infill Swamp)**

Man Made Features



Man Made Features



Fig. 6.1 **Photographs of the Abandoned Railway Corridor and a Cutting**



Fig. 6.4 **Photograph of a Typical Fire Trail (Courtesy of IC)**

Man Made Features



Fig. 6.5 **Photograph of Lake Avon (Courtesy of IC)**



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