

Build something great™



>Welcome

Berrima Colliery - Closure Working Group

Mittagong RSL 13 August 2018

Agenda

1. **Welcome and introductions**
2. **History of colliery and decision to close**
3. **Site and surrounds**
4. **How did we get here**
5. **Current status**
6. **Next steps**
7. **CWG role and information needs**
8. **General business**
9. **Next meeting**

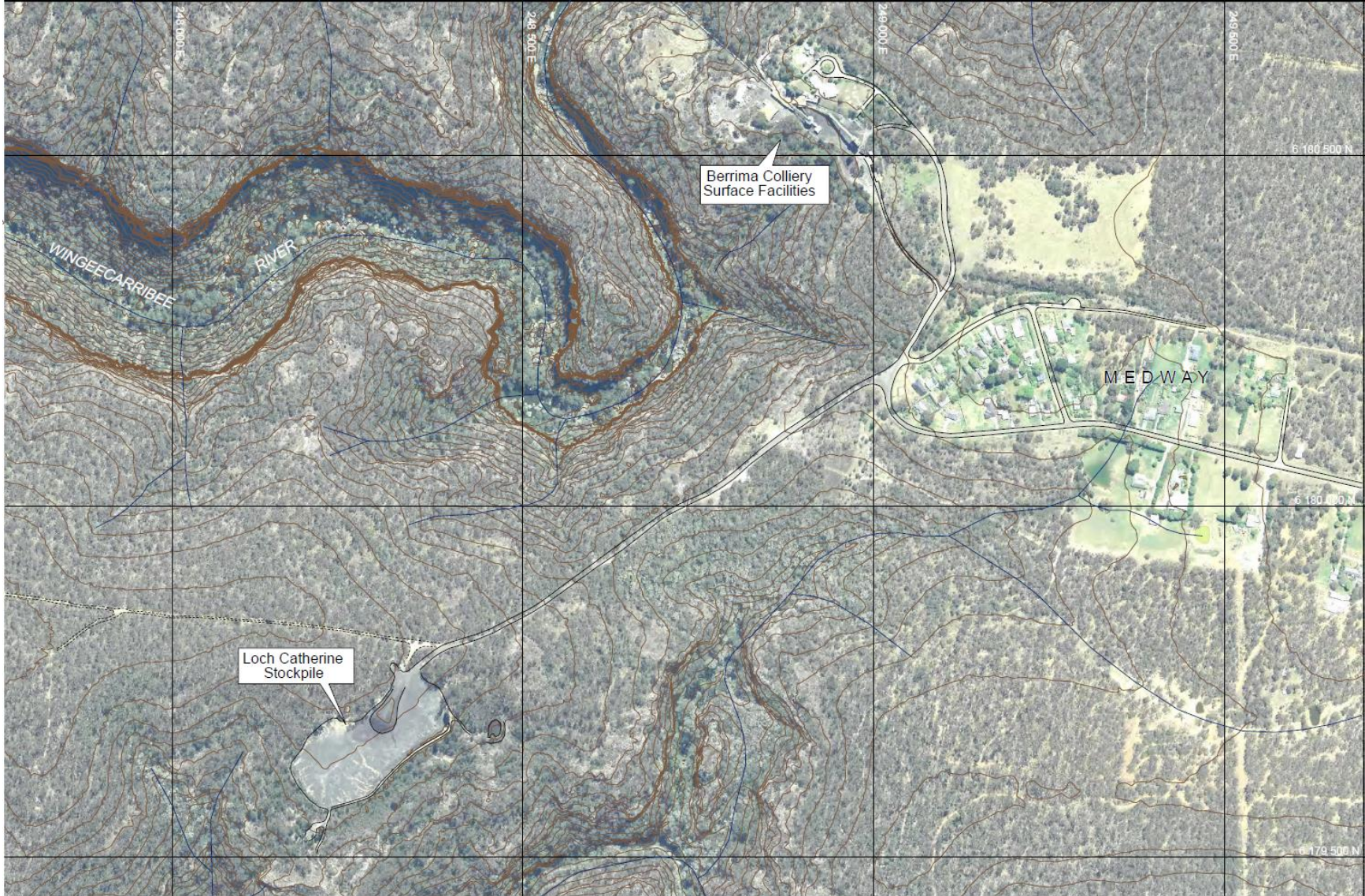
Introductions

- > **Boral - Fabio Colusso, Greg Johnson, Rod Wallace**
- > **Resource Regulator - Greg Kininmonth, Will Mitry**
- > **Environment Protection Authority - William Dove, Andrew Couldridge**
- > **WaterNSW - Ravi Sundaram**
- > **Wingecarribee Shire Council - Barry Arthur**
- > **Western Sydney University - Dr Ian Wright (apologies)**
- > **Community - Clive West, Alan Lindsay, Graham Kelly (apologies), Ray Nolan, Julian Brophy**
- > **Independent chair - Brad Mullard**
- > **Minute taker – Rob Byrnes**

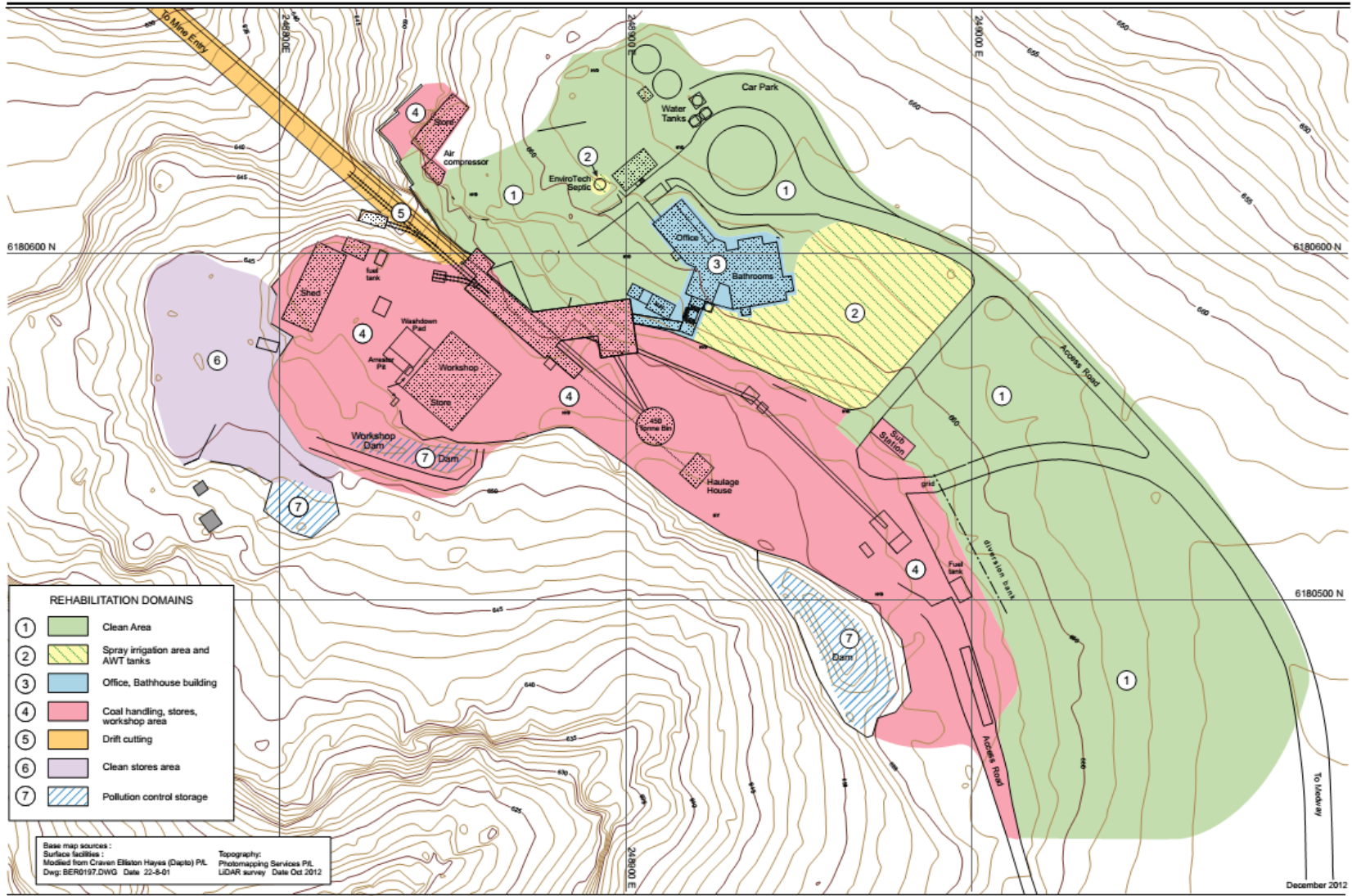
History and decision to close

- **Early mine workings in 1870's**
- **Continuous operations since 1926**
- **Bord and pillar mining - supplied cement works with coal ~250,000 tpa**
- **Legislative changes in 2007 - need development consent**
- **Development application for continued operations 2011**
 - **Limited baseline monitoring data**
- **Development consent June 2012**
- **Court appeals with SHCAG**
- **Planning uncertainty due to appeals - Care and maintenance (C&M) 2013**
- **Discontinue court appeals 2014**
- **High carrying costs of C&M - decision to close 2014**

Surface infrastructure



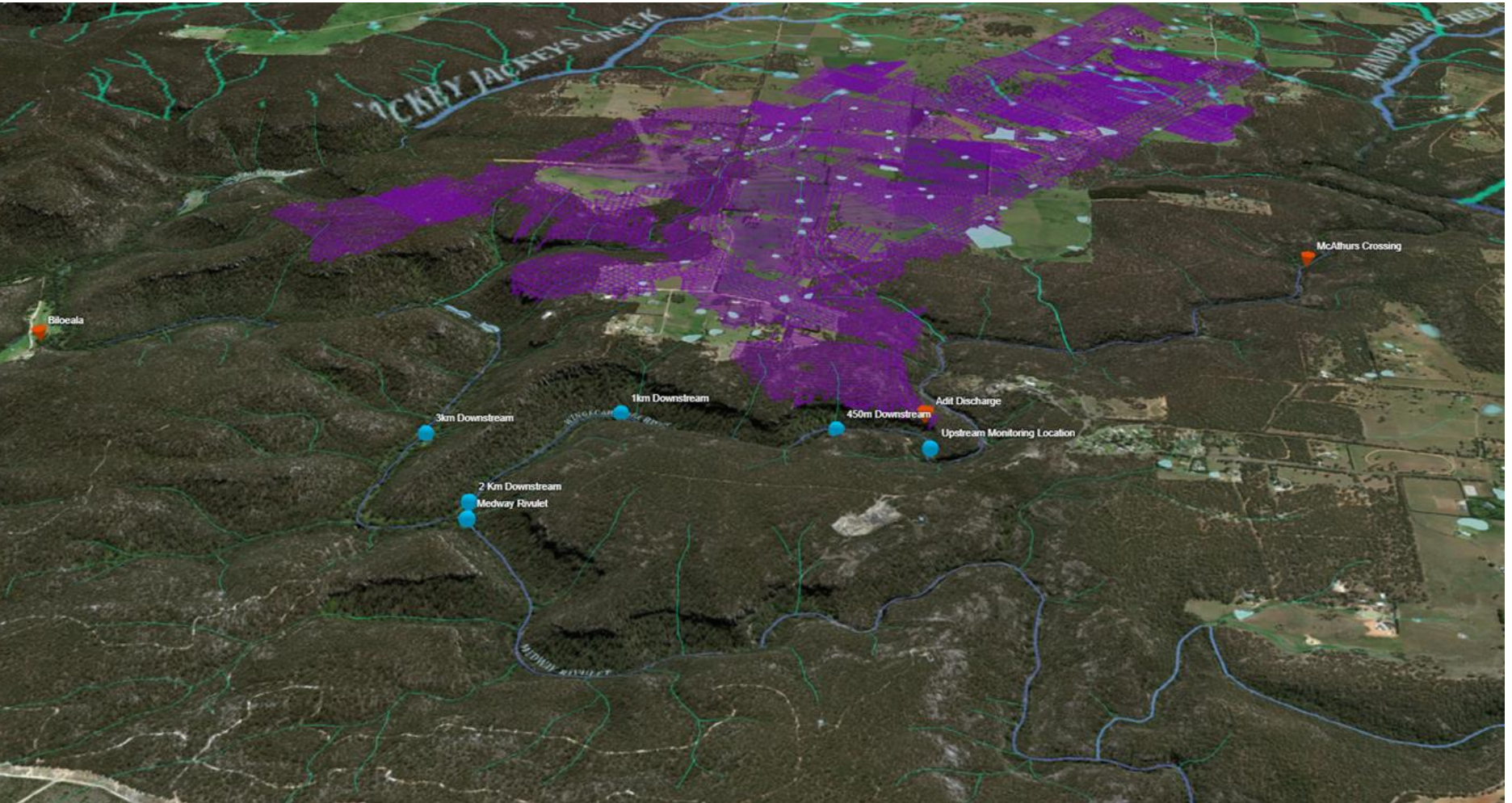
Surface infrastructure – Pit Top



Base map sources :
 Surface facilities :
 Modified from Craven Elliott Hayes (Dapto) PL
 Dwg: BER0197.DWG Date: 22-5-01

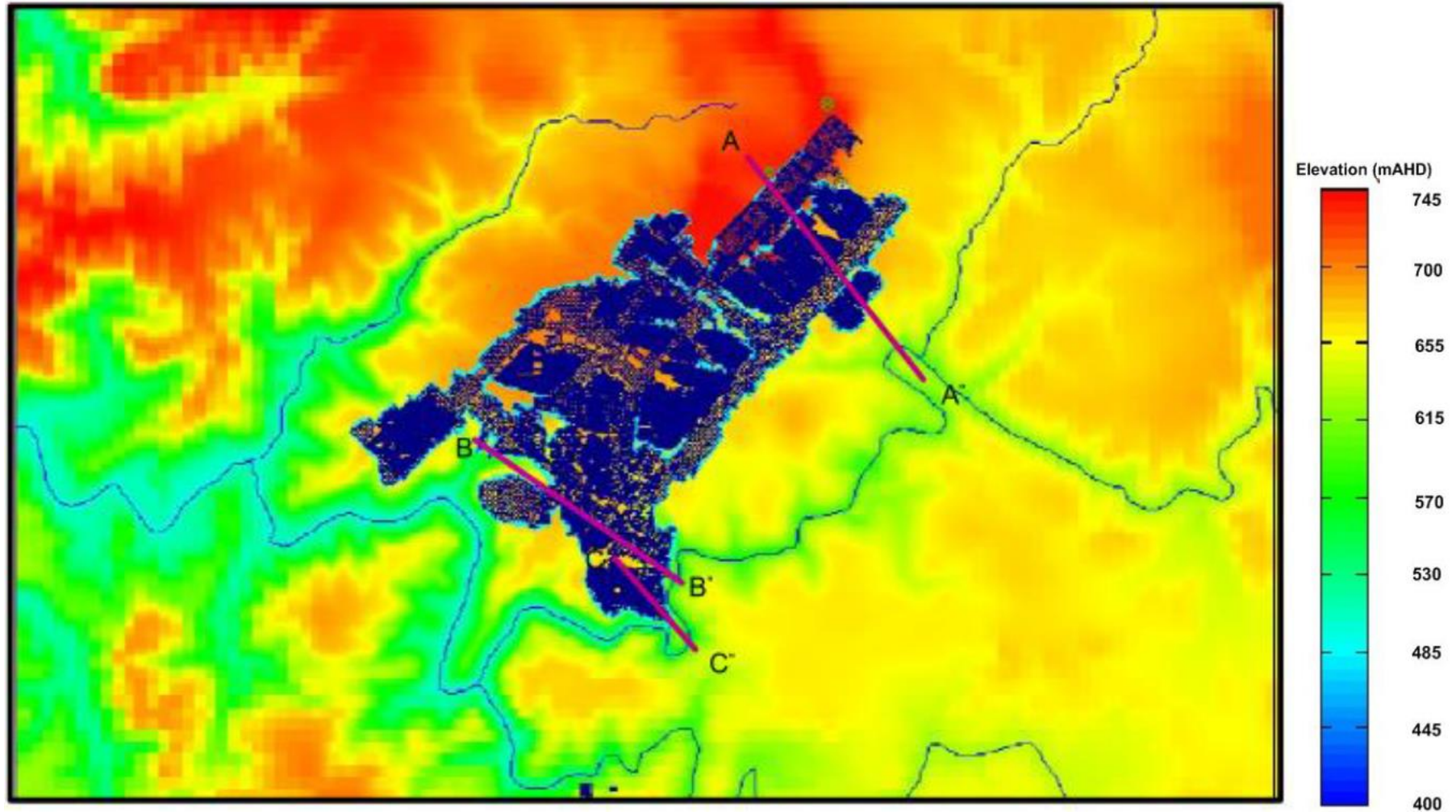
Topography:
 Photomapping Services P/L
 LIDAR survey Date Oct 2012

Site and surrounding environment (cont'd)

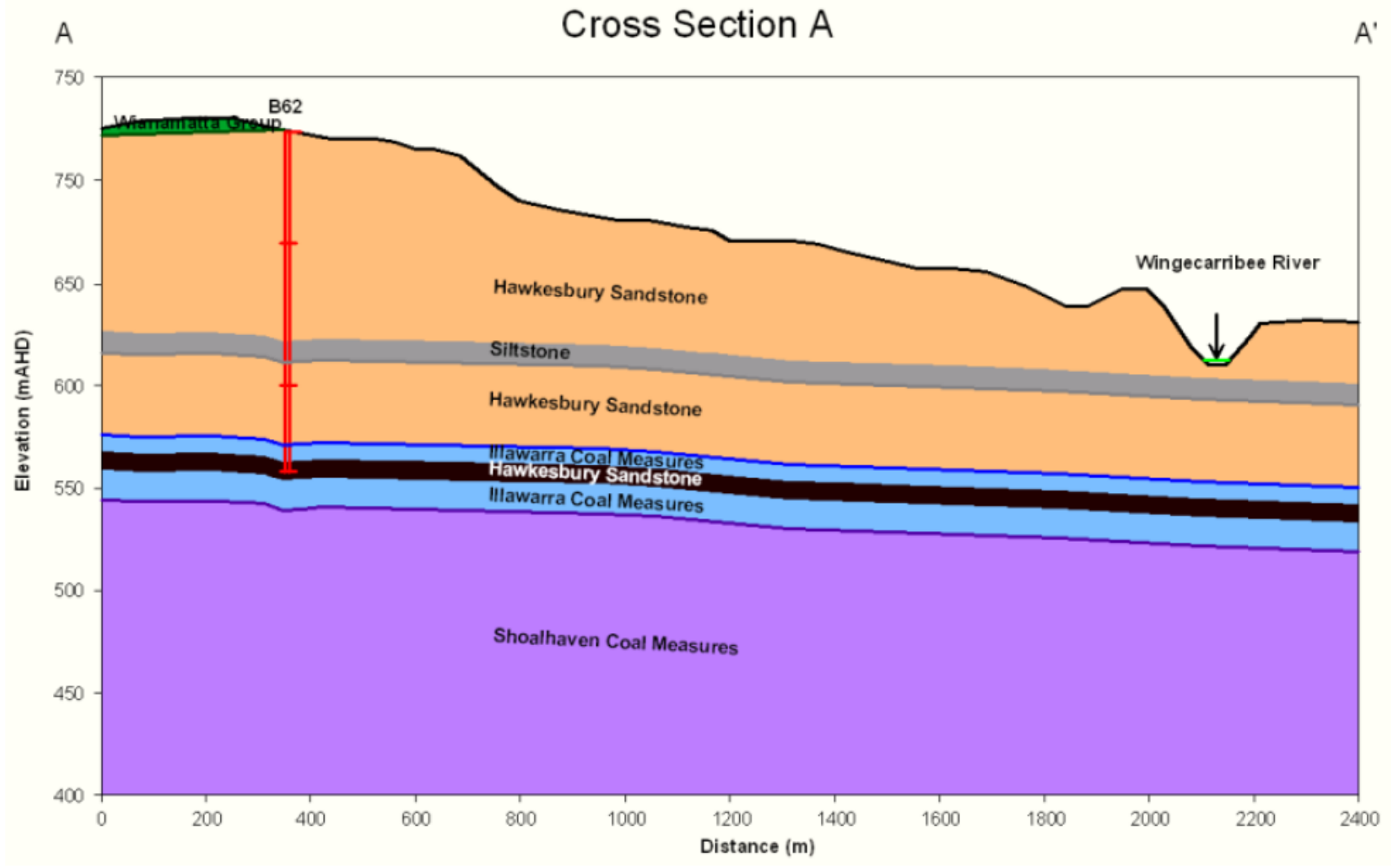


Source: Resource Regulator

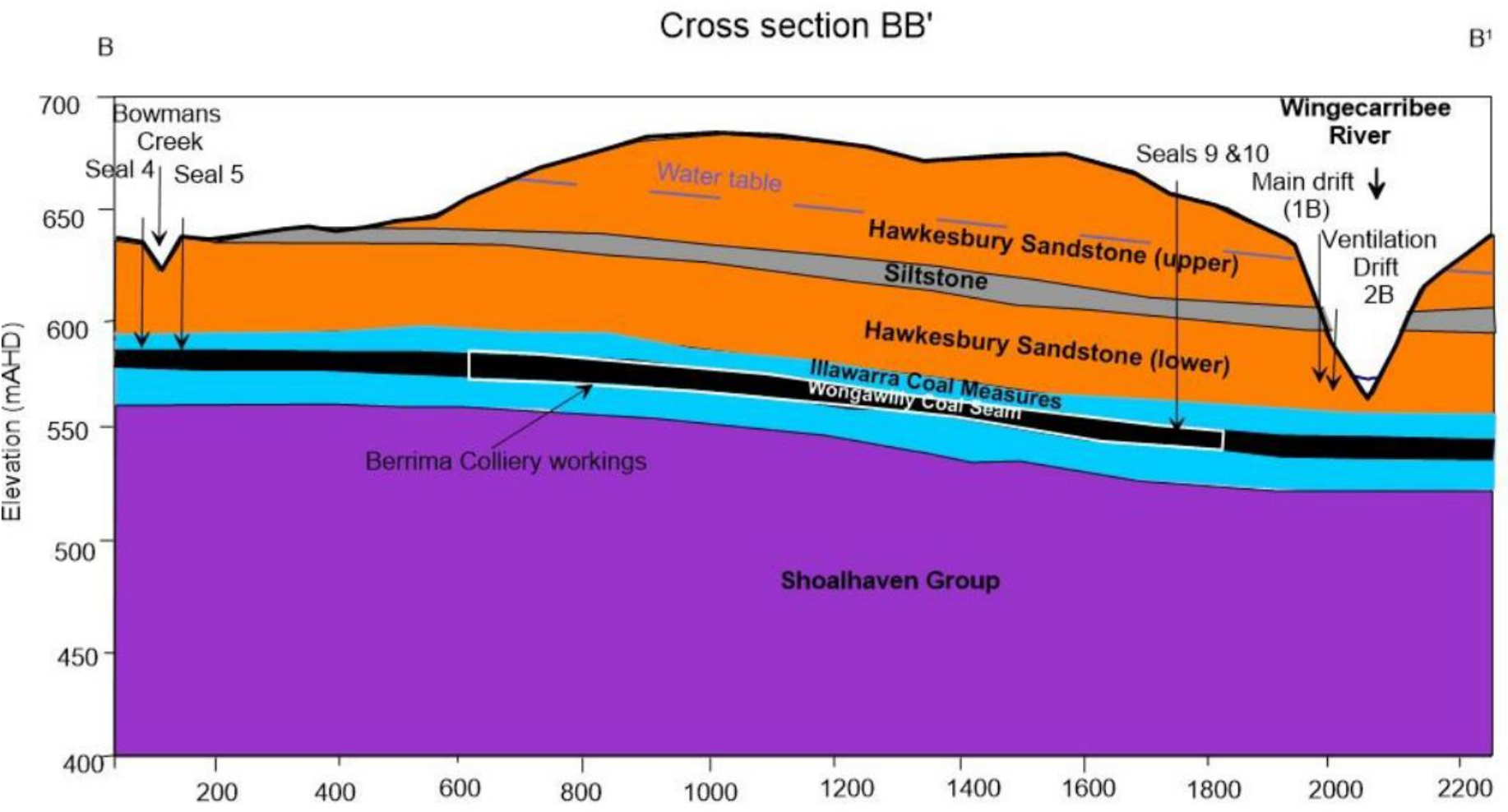
Cross sections plan view



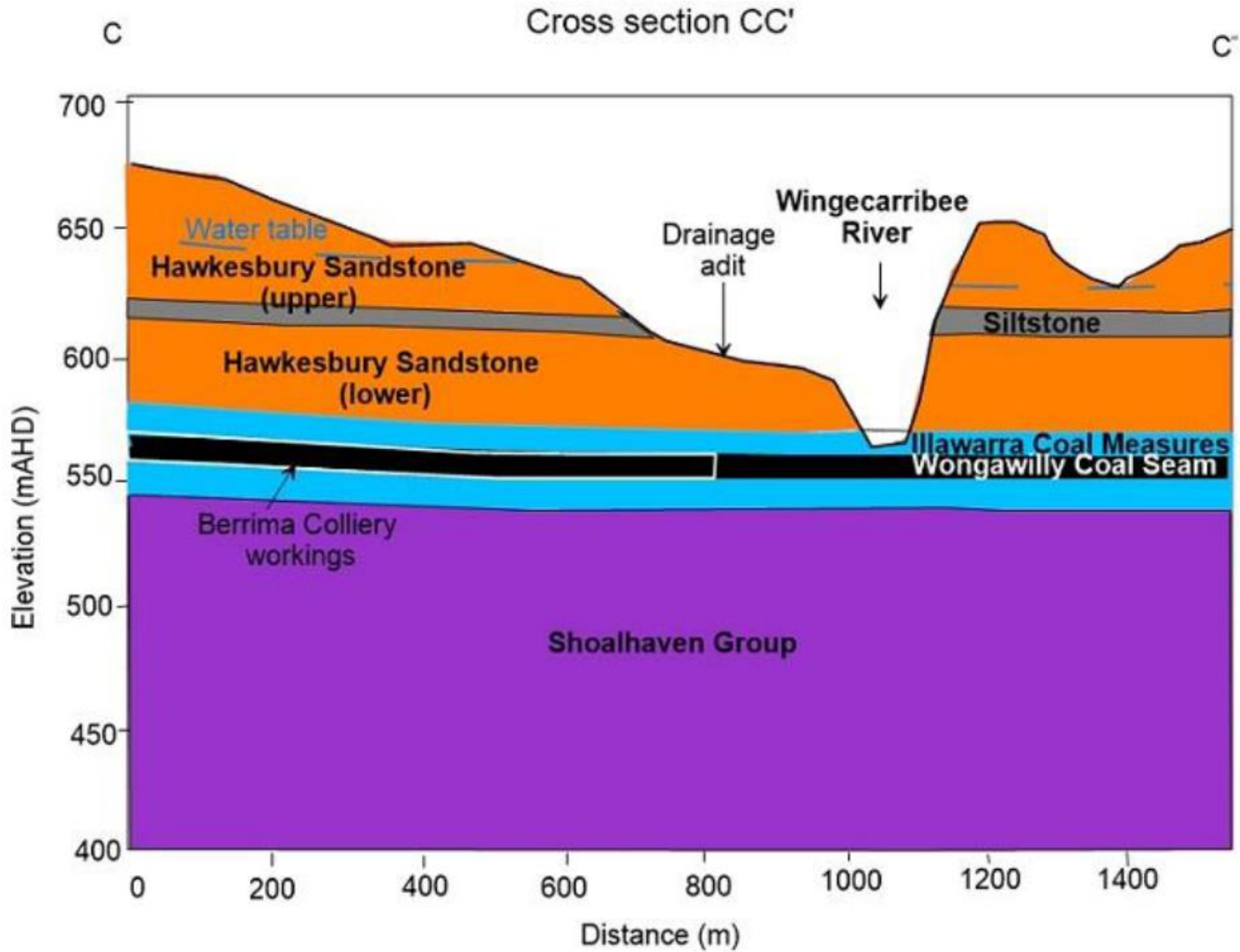
Cross section A



Cross section BB



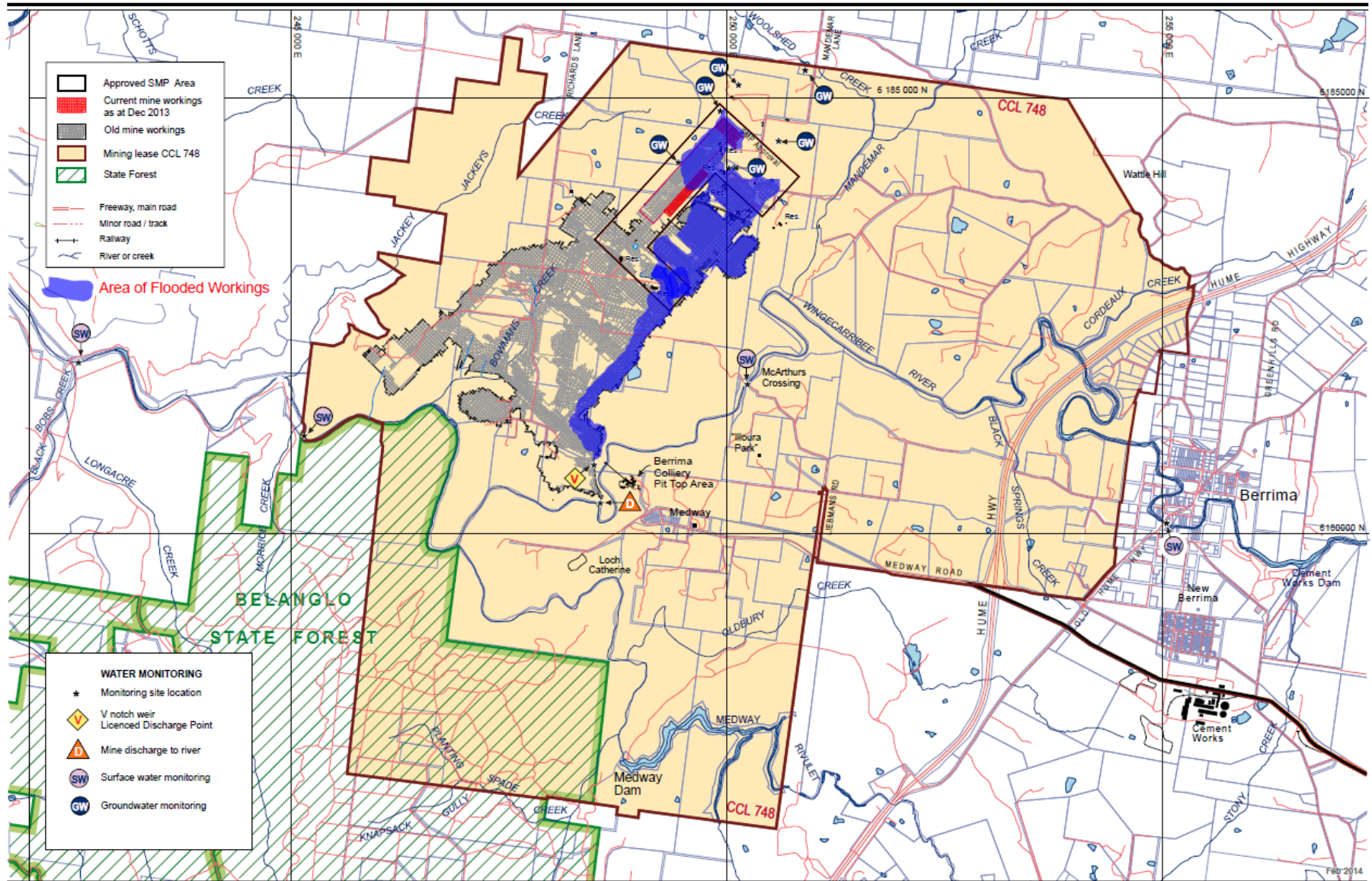
Cross section CC



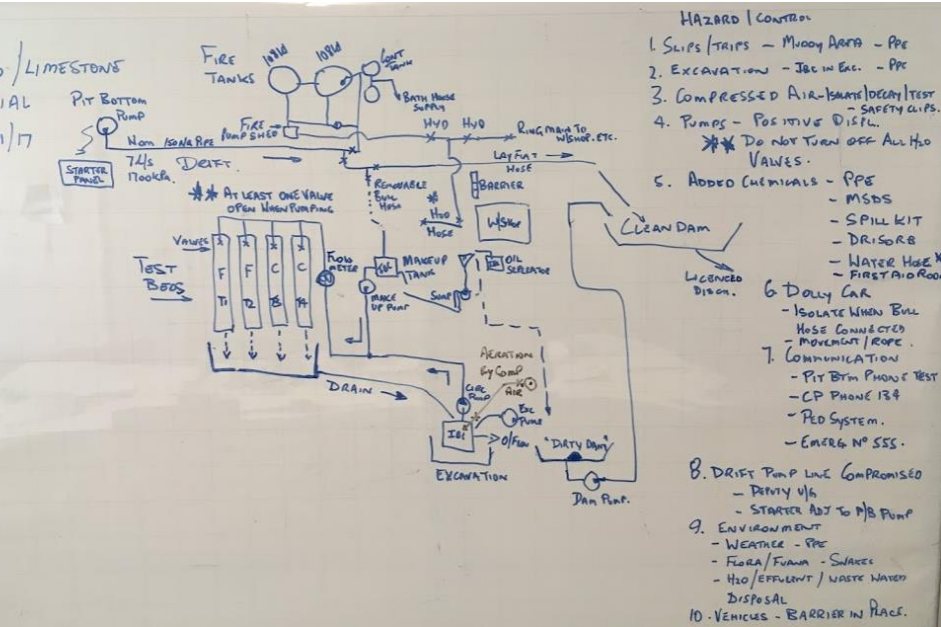
How did we get here?

- **2013 - Care & maintenance announcement**
- **2014 - Decision to close - intention to fully seal**
- **2015 - Geotechnical advice indicates high leakage**
 - **Consistent water quality – seek free draining mine**
 - **Lodge closure plan**
- **2016 - Cease pumping – mine begins to free drain**
 - **Elevated minerals in discharge – TARP and notification to regulators**
 - **Engagement of experts**
- **2017 - Increased frequency and extent of monitoring**
- **2017 - Pit Top trials (November)**
- **2018 - Underground treatment (Dec/Jan)**
 - **Stage 1 Closure Plan**
 - **Re-forming closure strategy – ascertain public interest (CWG)**
 - **First CWG with community**

Extent of flooded workings



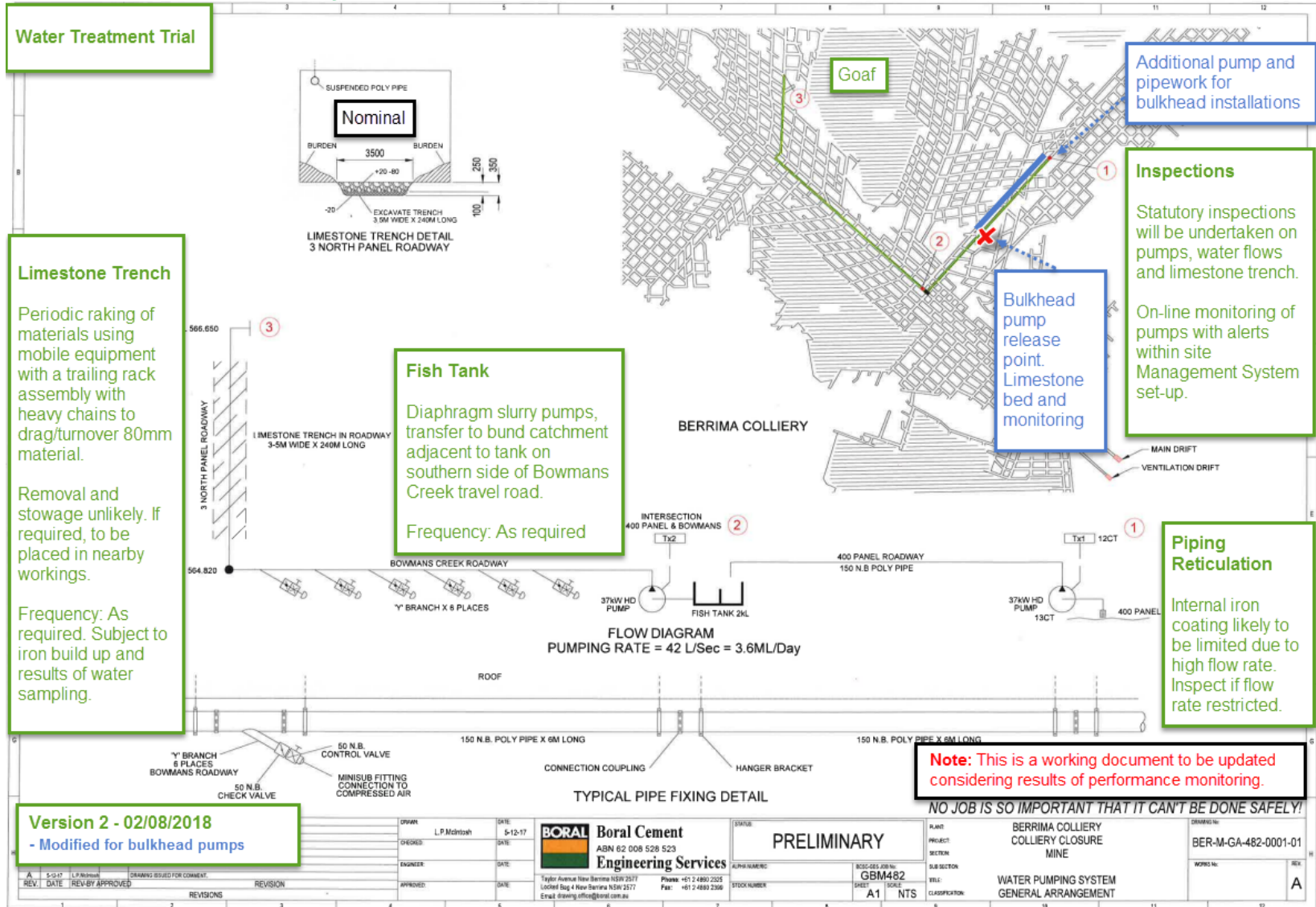
Pit top trials during November 2017 were used to design underground treatment trial



Current status

- **Underground treatment**
- **Assumption validation of sealing – interim sealing plan**
- **Gathering feedback (CWG)**

The underground treatment was installed in 3 stages from early December 2017 until mid January 2018



Version 2 - 02/08/2018
 - Modified for bulkhead pumps

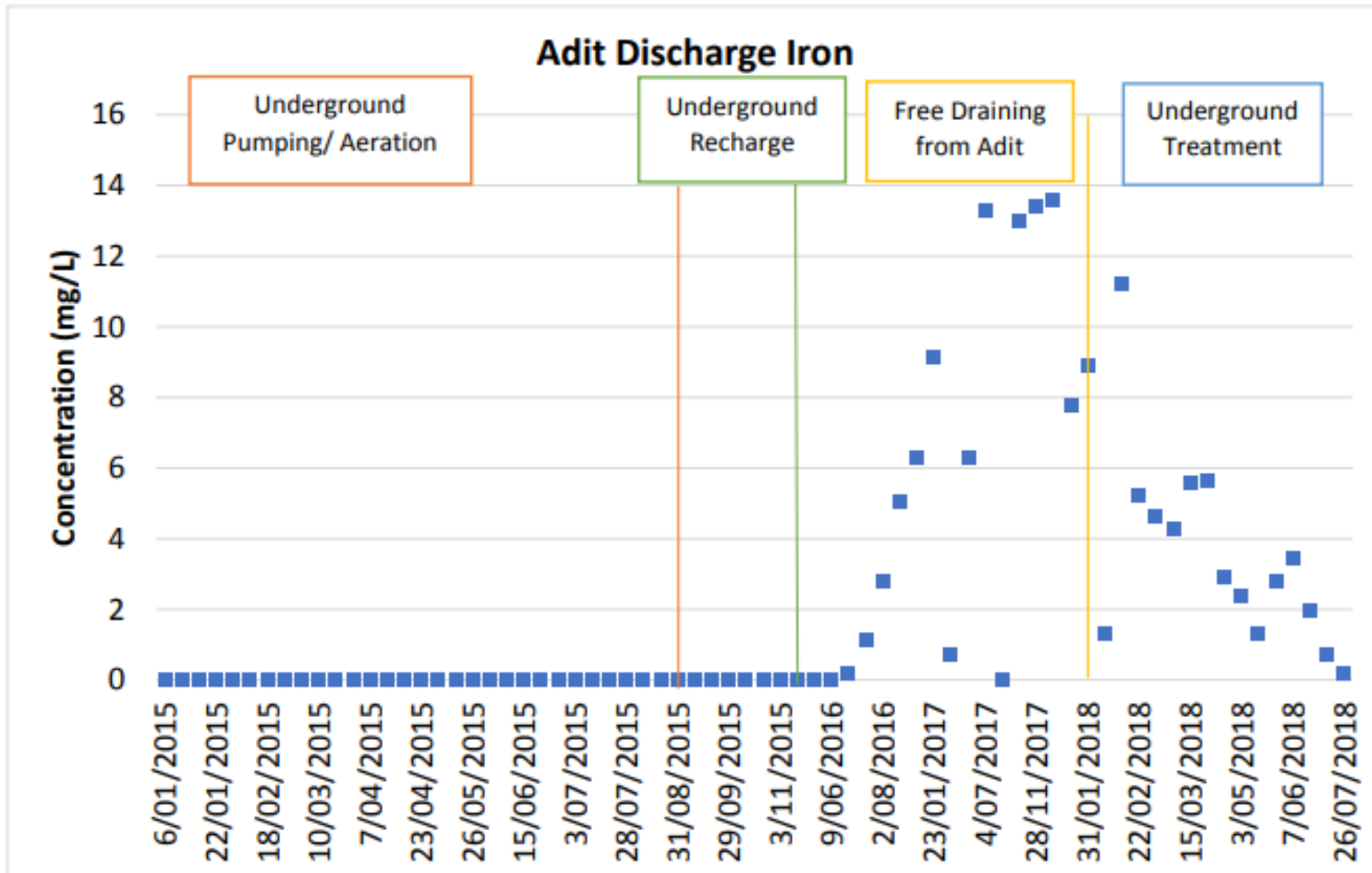
REV.	DATE	REV BY	APPROVED	REVISIONS
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 Locked Bag 4 New Berrima NSW 2577
 Email: drawing.offices@boral.com.au
 Phone: +61 2 480 2325
 Fax: +61 2 480 2306

PRELIMINARY
 PLANT: BERRIMA COLLIERY
 PROJECT: COLLIERY CLOSURE
 SECTION: MINE
 SUB SECTION:
 TITLE: WATER PUMPING SYSTEM
 CLASSIFICATION: GENERAL ARRANGEMENT

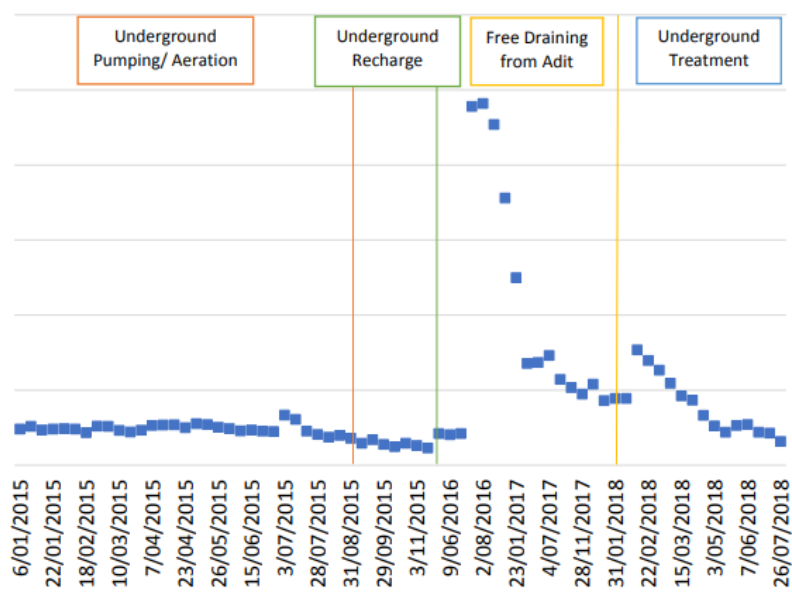
DRAWING NO: BER-M-GA-482-001-01
 WORKS NO:
 REV: A

Water Quality Improvements following treatment - Iron

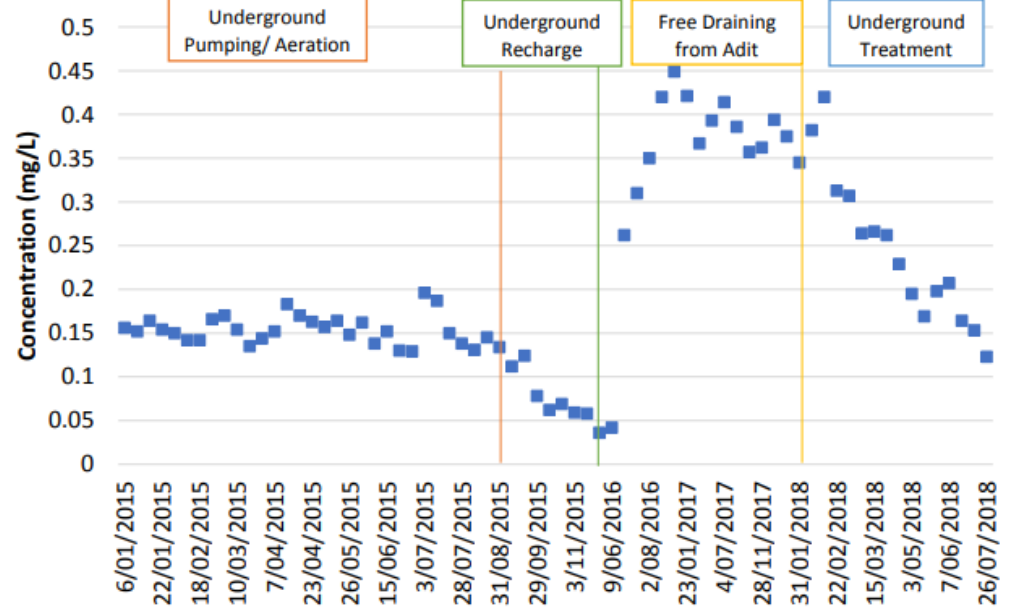


Water Quality Improvements following treatment

Adit Discharge Zinc



Adit Discharge Nickel



Interim Sealing Plan - Roof bolting works, dewatering & Bulkheads B1 - B7



Next steps

- **Interim sealing plan to validate flow and porosity assumptions**
- **Further CWG consultation**
- **Lodgement of Stage 2 Closure Plan**

CWG role and information needs

General business

Next meeting date

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