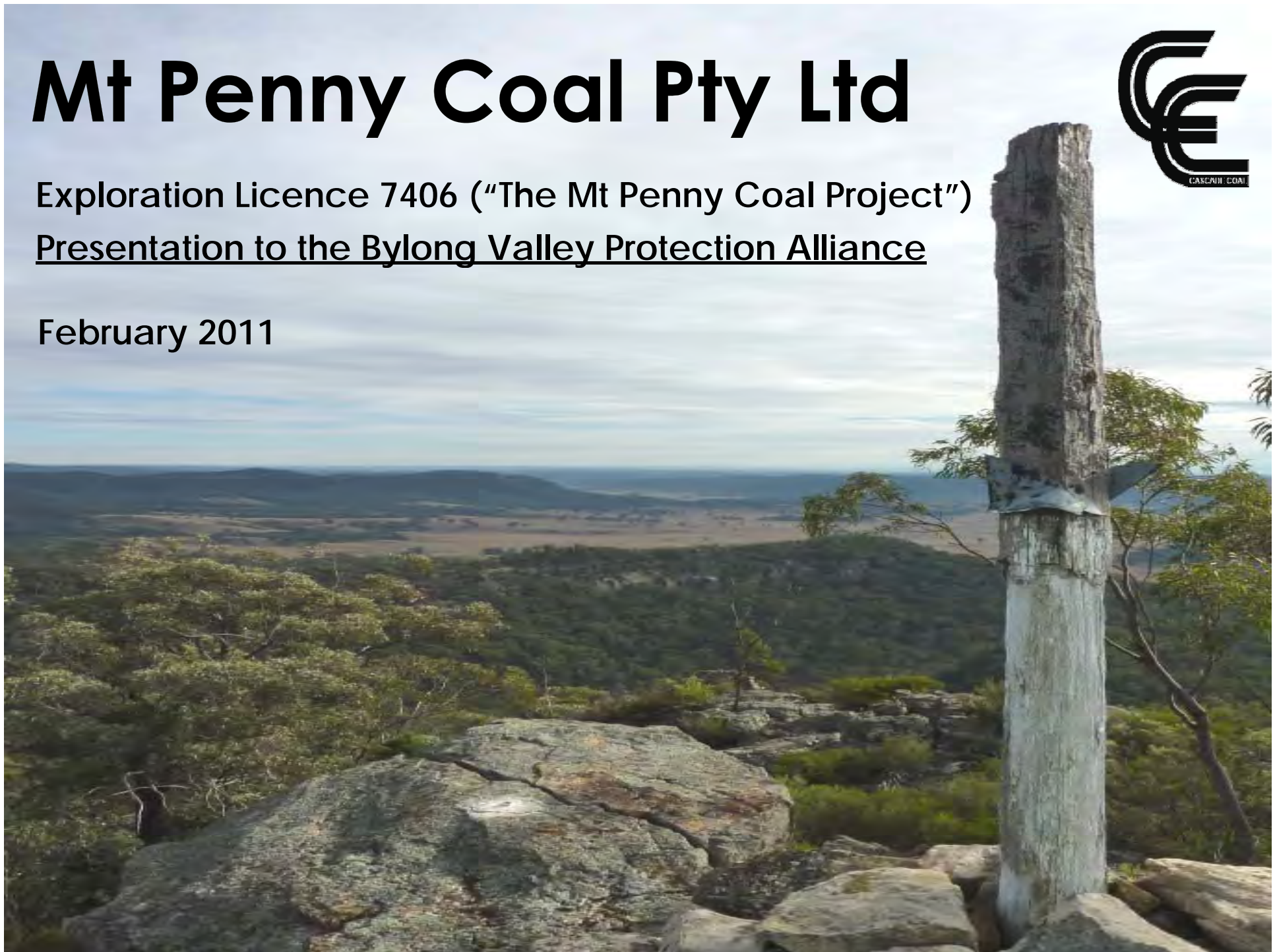


Mt Penny Coal Pty Ltd



Exploration Licence 7406 ("The Mt Penny Coal Project")
Presentation to the Bylong Valley Protection Alliance

February 2011





Mt Penny Coal Pty Ltd

James McGuigan

Introduction

- Project Team:
 - James McGuigan;
 - Mike Johnstone;
 - Alan Wells;
 - John McGuigan.

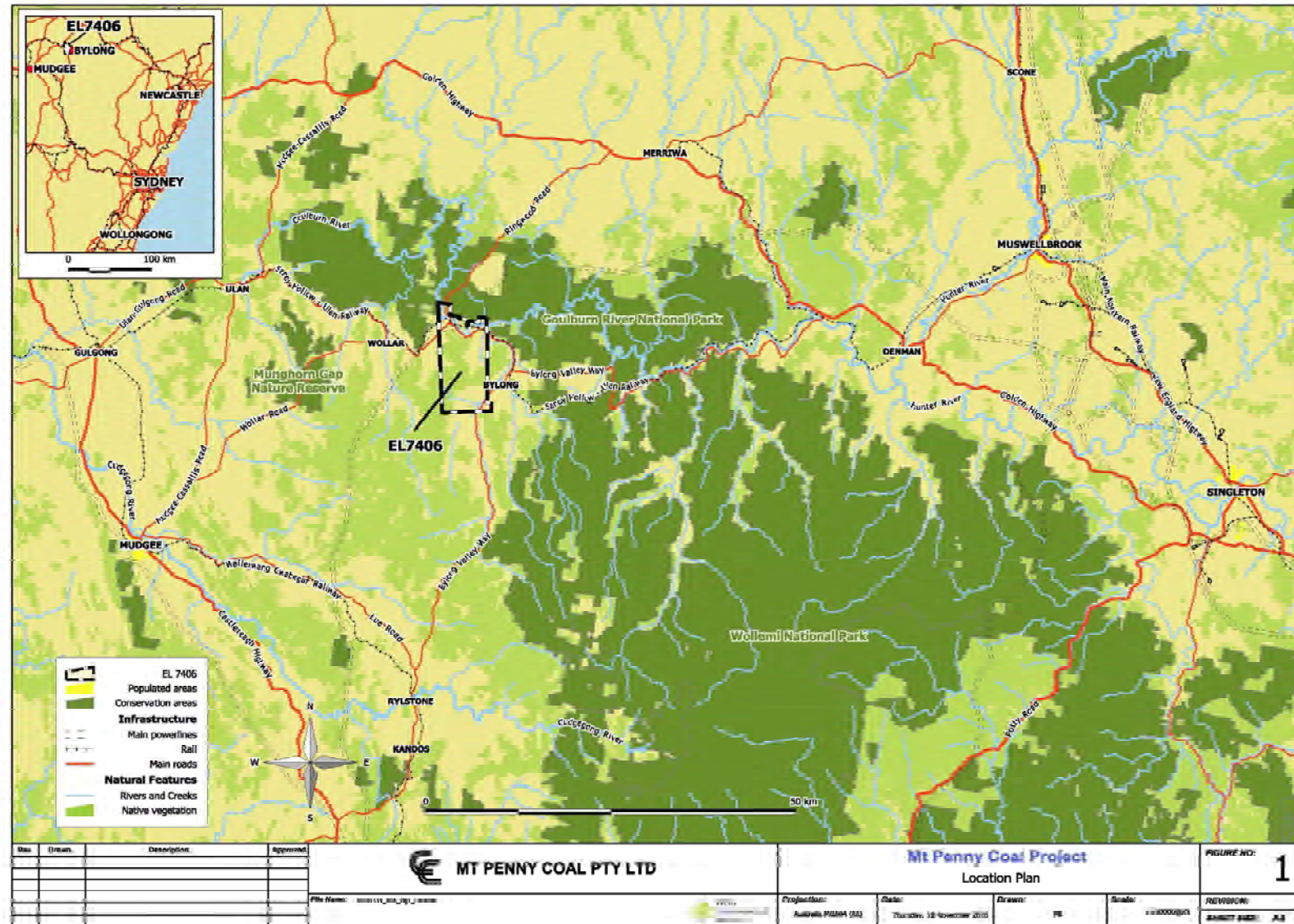


Overview

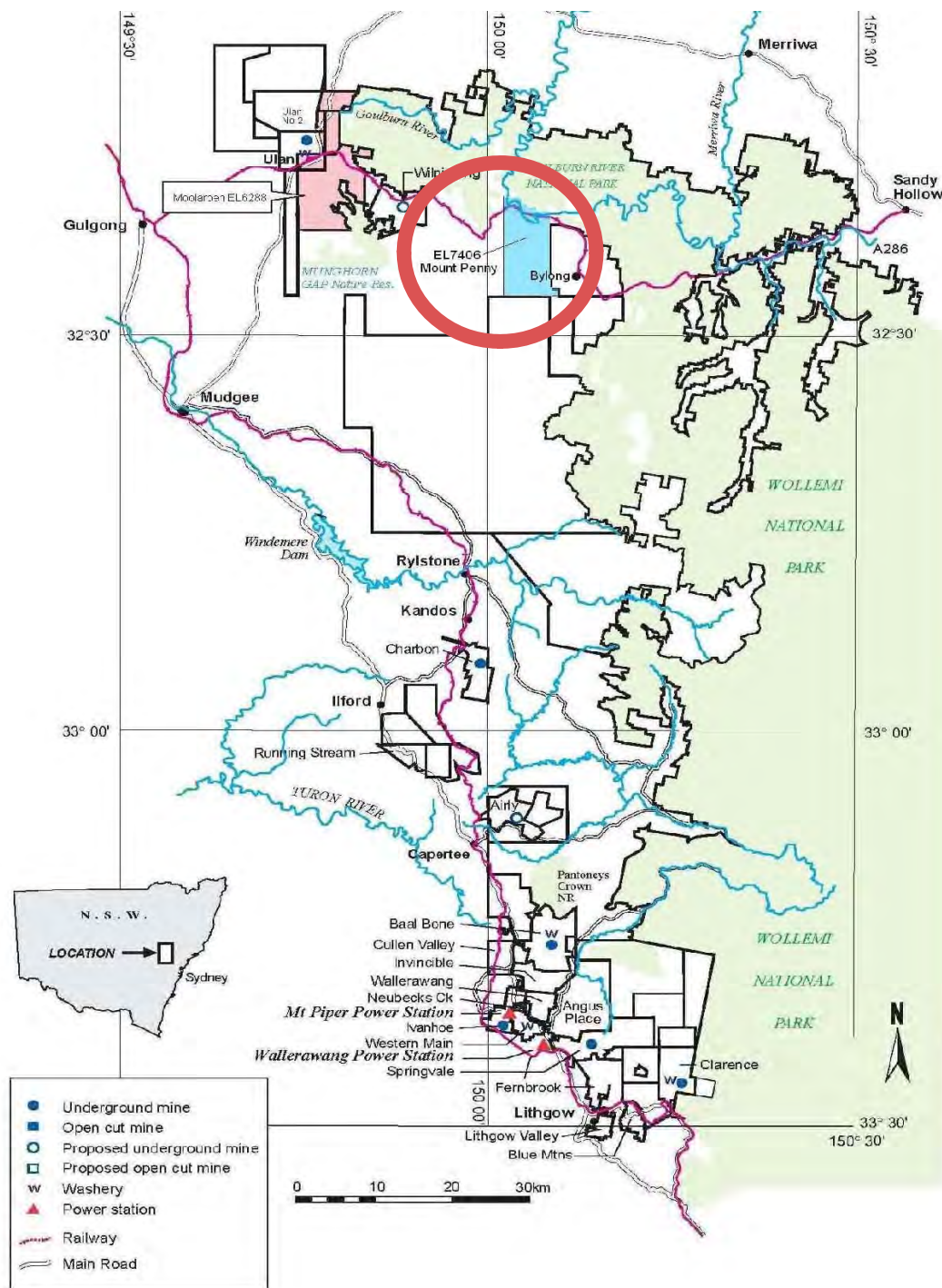
- Cascade Coal Pty Ltd ("Cascade") was granted Exploration Licence ("EL") 7406 ("Mt Penny or "The Mt Penny Coal Project") in October 2009. Cascade holds EL 7406 through its subsidiary Mt Penny Coal Pty Ltd.
- Mt Penny is located 60km north-east of Mudgee and 5km north-west of Bylong, within the Mid-Western Regional Council area.
- Exploration drilling has confirmed a substantial coal resource comprising:
 - 95.3 Million tonnes ("Mt") of Measured Resources;
 - 22.3 Mt of Indicated Resources;
- Measured and Indicated Resources are preserved under relatively shallow cover and are amenable to open cut development;
- Current mine planning suggests a recoverable resource of 101Mt.



Location Plan



Location in the Western Coalfields



Cascade Coal Pty Ltd

- Cascade is a 100% Australian owned company established in 2008 to engage in greenfields exploration and developments within the coal sector of New South Wales.
- Cascade is led by a group of shareholders who have significant experience in the coal sector and have been associated with large scale developments of coal properties in Australia and overseas including:

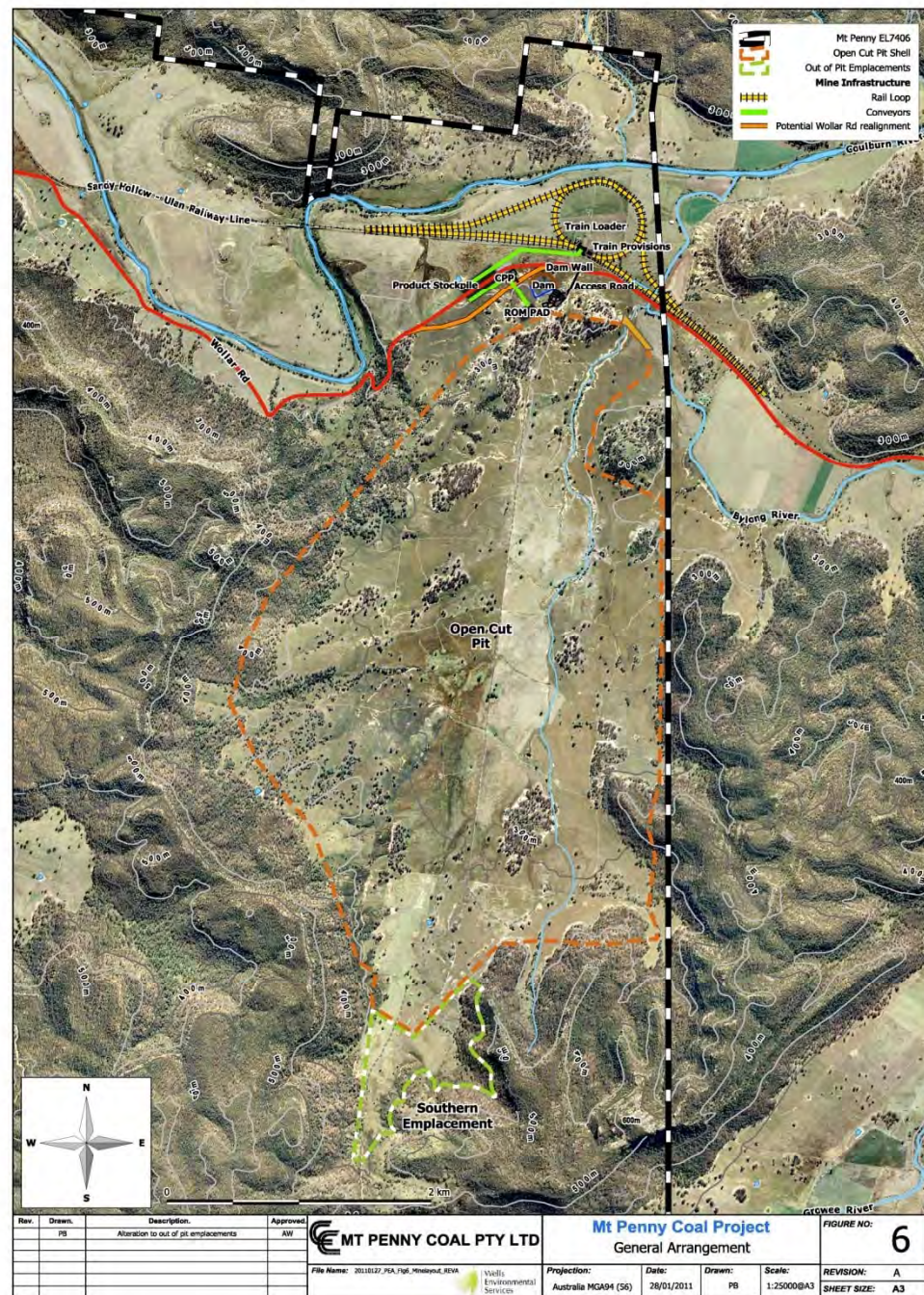


Project Overview

- The open cut comprises:
 - 101Mt open cut mined at 5Mtpa ROM;
 - Thermal coal for export and domestic markets;
 - Administration and storage complex, staged bi-directional rail loop, workshop and coal handling and preparation plant;
 - Approximately 300 construction jobs and 250 operational jobs;
 - Capital expenditure of \$400 million.
- Cascade has the rights to acquire all key properties associated with The Mt Penny Coal Project.
- Minimal infrastructure is proposed on any other lands.



General Arrangement



Legend:

- Mt Penny EL7406**
Open Cut Pit Shell
- Mine Infrastructure**
Potential Wollar Rd Realignment
Rail Loop
- Landownership**
Department of Lands (Crown)
National Parks and Wildlife Service
'Cascade Coal Pty Ltd' Controlled Land
**Note: All other land, except the above mentioned, is 'freehold' Dwelling

Map Labels: Goulburn River National Park, Goulburn River, Cogan Creek, Bylong River, Growee River, BYLONG, Train Loader, Train Provisions, CPP, ROM PAD, 001A, 001B, 001C, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 020, 021, 022, 023, 024, 025, 026, 027, 028, 034, 036.

Scale: 0 to 2 km

North Arrow: N, S, E, W

Table:

Rev.	Drawn:	Description:	Approved:
	PS	Alteration to out of pit emplacements	AM

MT PENNY COAL PTY LTD

Mt Penny Coal Project
Land Ownership / General Arrangement

Figure NO: 2

File Name: 20110127_PFA_Pg2_Landownership_RVA

Well: Environmental Services
Australia: MGA94 (56)

Projection: Dells: 31/01/2011
Drawn: PS
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REVISION: A
SHEET SIZE: A3





Geology & Exploration

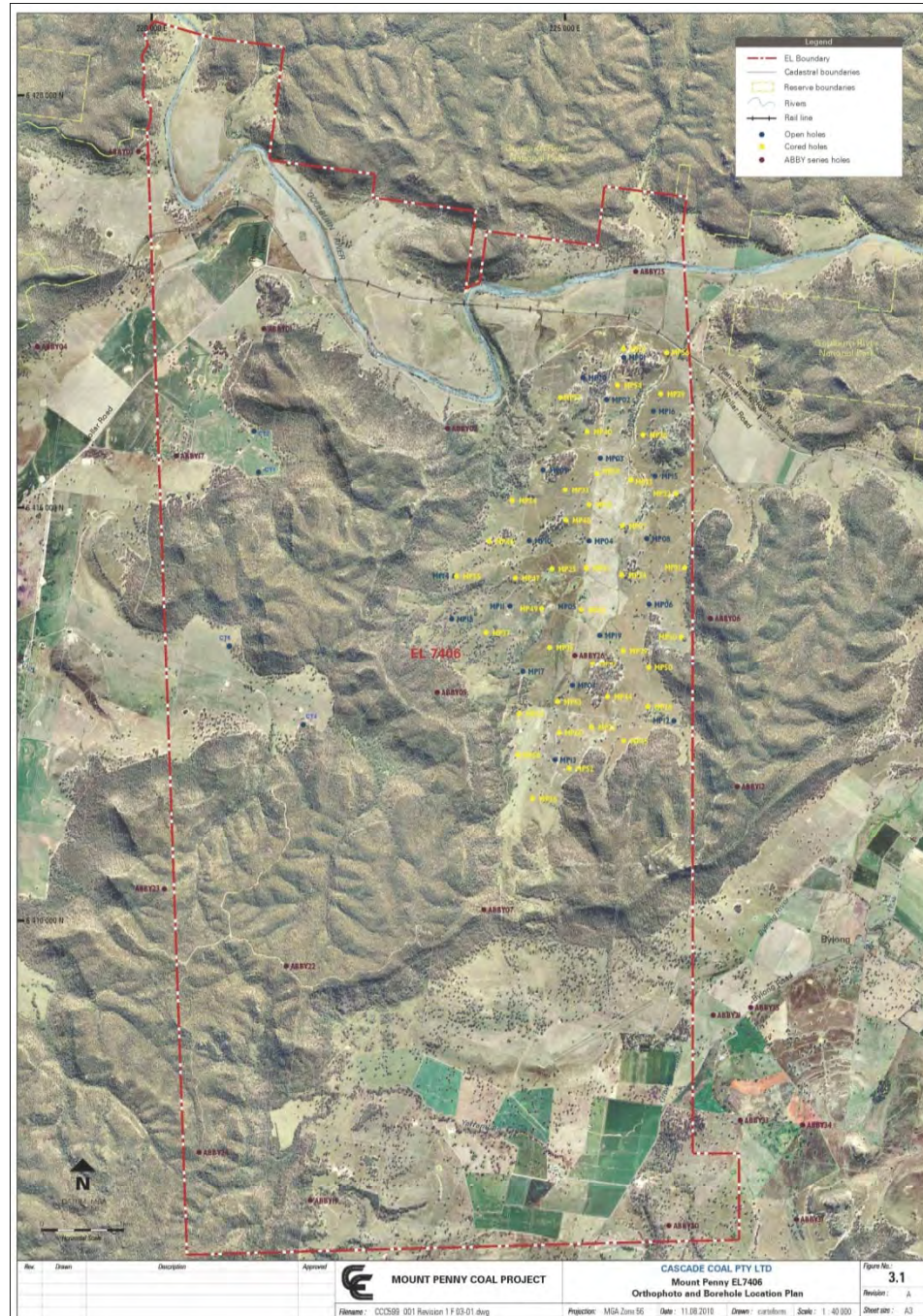
Mike Johnstone

Exploration Activities

- Agreements are in place for most freehold land within the EL;
- Drilling commenced in November 2009 and is continuing;
- To date 3,600m of work in 65 boreholes, including 40 fully cored and 25 Open Holes on 300 to 750m centres;
- Focus has been on the central eastern part of the EL, with some reconnaissance drilling in the western part of the EL;
- Investigations have confirmed the presence of a substantial coal resource that is preserved under relatively shallow cover.

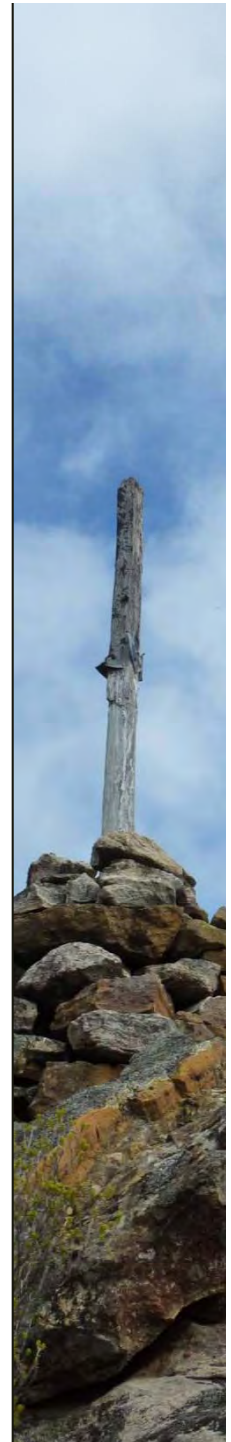


Exploration Plan



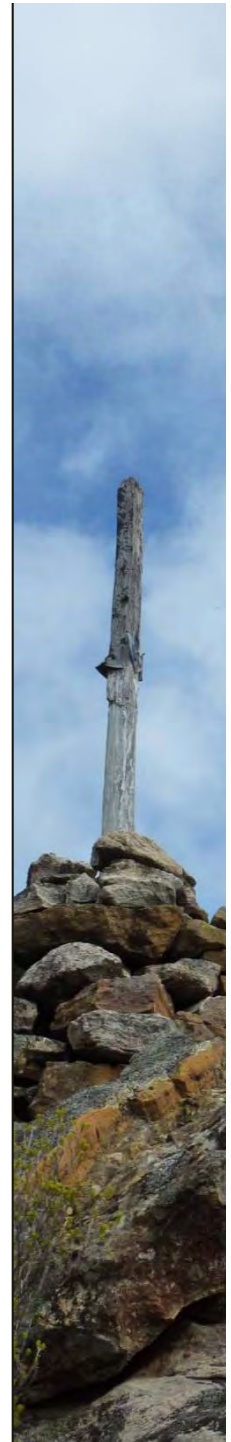
Geology

- Permian Illawarra Coal Measures.
- 4 Groups of Seams over stratigraphical interval of about 60m:
 - **Coggan Seam** - 2 splits, 0.5 to 2.2m thick, regionally correlated with Lithgow Seam.
 - **Ulan Lower** - 4 splits each 0.3 to 1.5m thick, regionally correlated with Lidsdale in south and Ulan Lower section (DELW and G plies) in west.
 - **Ulan Upper** - 5 splits each 0.3 to 0.9m thick, regionally correlated with Ulan Upper section (ACLWR). Upper three splits carry modest swell-possible Irondale equivalents (Ulan A1).
 - **Goulburn River** - 2 splits each 0.3 to 1m thick- regionally correlates with Moolarben Seam in west.
- Cumulative coal of between 6 and 9 metres ("m"), from 20 to 90m depth.



Recovery and Utilisation

- Mine System is able to recover seams down to 0.2m thick;
- High volatile thermal coal resource;
- For Maximum resource recovery:
 - Blend low ash raw with high ash;
 - Wash at higher gravities-Ulan coal performs better;
 - Combine washed product with raw Goulburn and Coggan;
 - 17-20% ash product @70-85% yield.
- Target markets include Korea, China, and India;



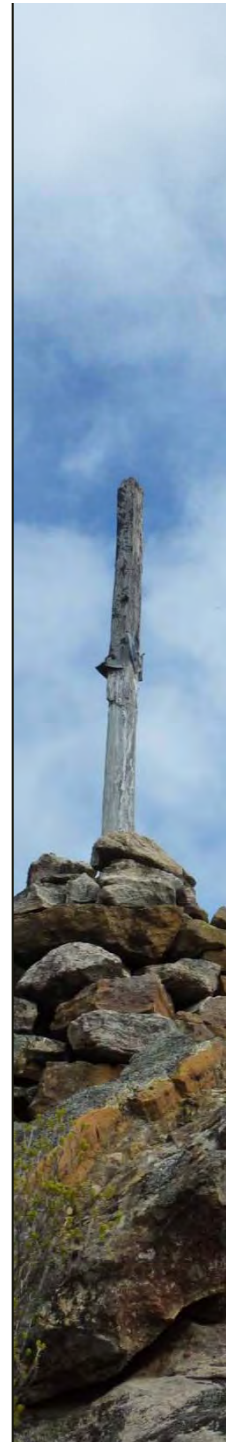


Conceptual Mine Plan

Mike Johnstone

Key Constraints to Design

- Goulburn River, Ulan-Sandy Hollow Railway Line, and Wollar Road to the north;
- Bylong River to the east;
- High ridge lines around the south, eastern and western sides;
- Incremental strip ratio increases to west and south;
- Proximity of steep slopes at pit limits;
- Availability of out of pit dump space;
- Requirement for external visual screening on eastern side;
- Thin seam mining.



Key Advantages of Design

- In-pit emplacement of overburden is uncommon in most mines as re-handling increases operational costs, it also limits the disturbance footprint of mine;
- Southern emplacement will be removed and fill final void at end of open cut;
- Open cut will not intersect Goulburn River or Bylong River alluvium;
- Open cut is visually and acoustically sheltered by natural topography;
- Impacts limited to a few private dwellings;
- Availability of infrastructure (e.g. railway).



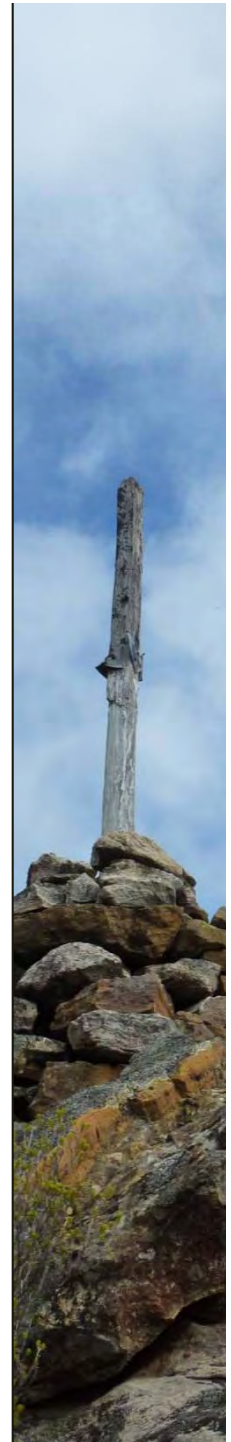
Mine Design Criteria

- 5Mtpa ROM coal open cut mine;
- 101Mt mineable reserve with a resource to reserve conversion at a ratio of 90%;
- 557Mbcm of overburden and waste;
- Thin multi-seam mine from Goulburn River to Coggan 1 seams;
- Blasting of overburden;
- Recovered by truck, excavator and surface miner to allow recovery down to 0.2m thick seams;
- 21 year, 24 hour, 7 day per week mine.

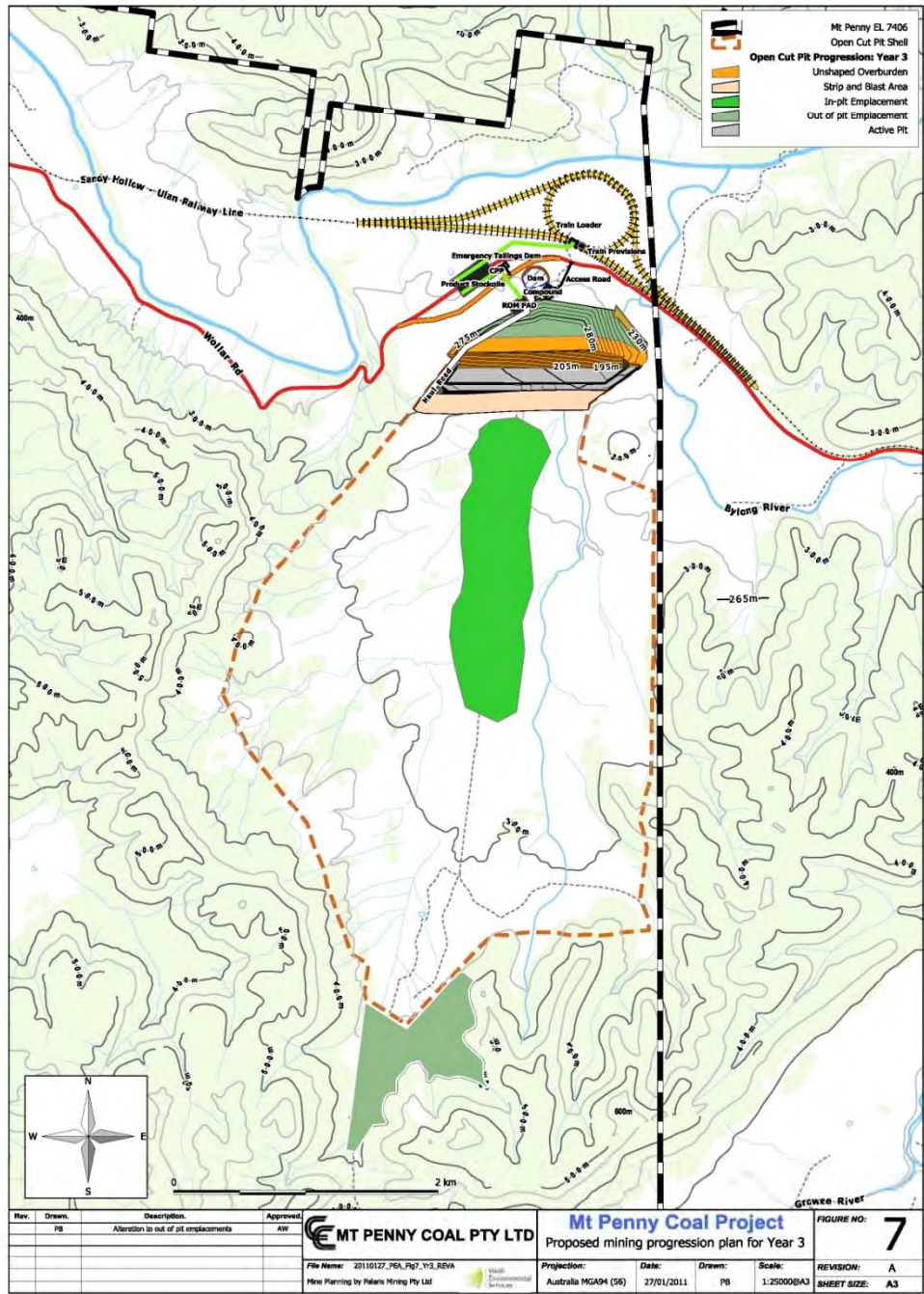


Mine Progression

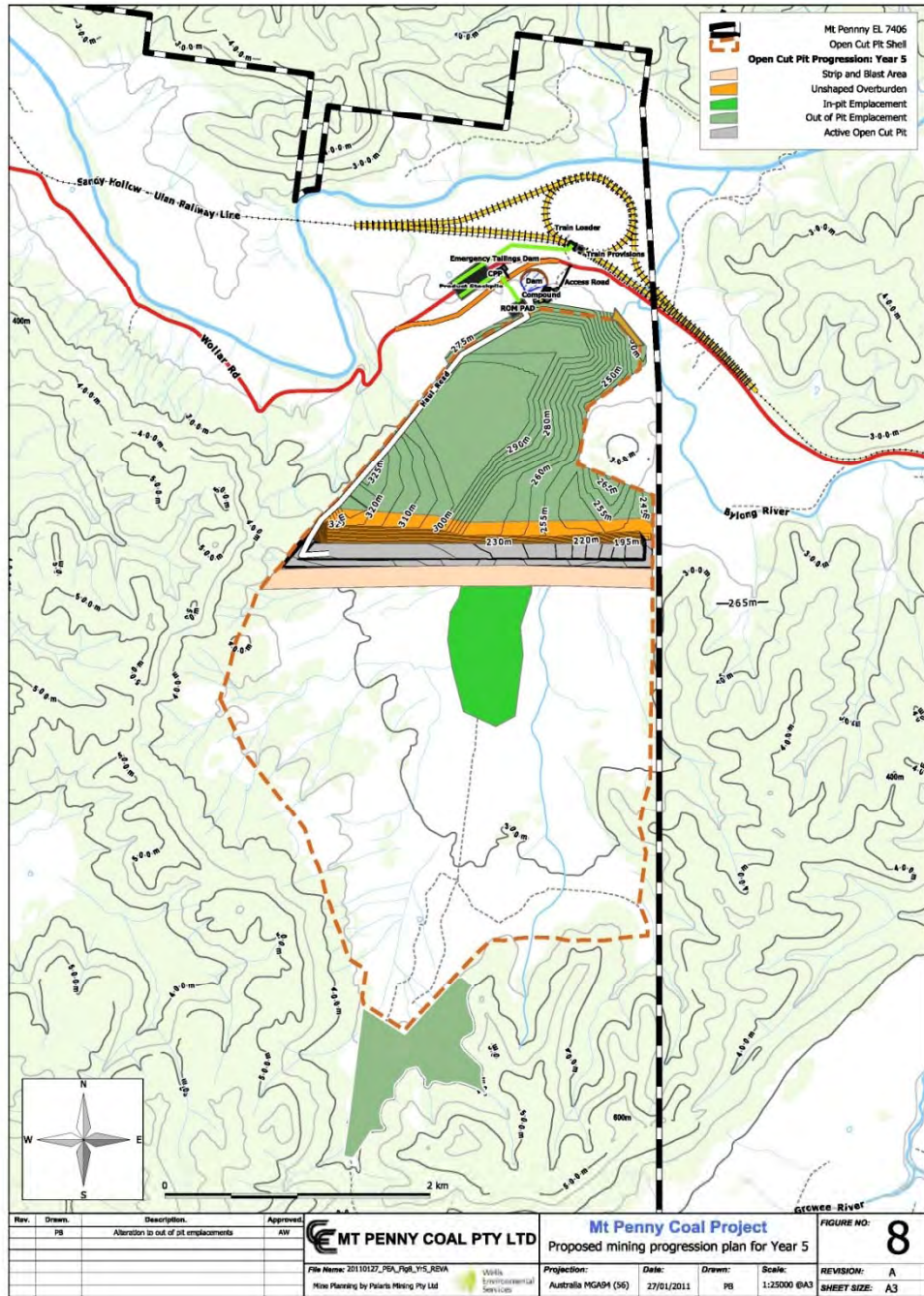
- Mining starts in the north and will be developed to the south in a series of 100m wide east west strips.
- As the pit develops, waste and reject will be dumped back into the mined-out void.
- In-pit emplacements will account for 10Mbcm, that will later be re-handled into the pit limiting total disturbance;
- Remaining overburden to southern emplacement;
- Final void in southern end of pit will be back-filled from the southern emplacement.
- Final landform will be sympathetic to surrounding and original topography, including a re-instated Coggan Creek.



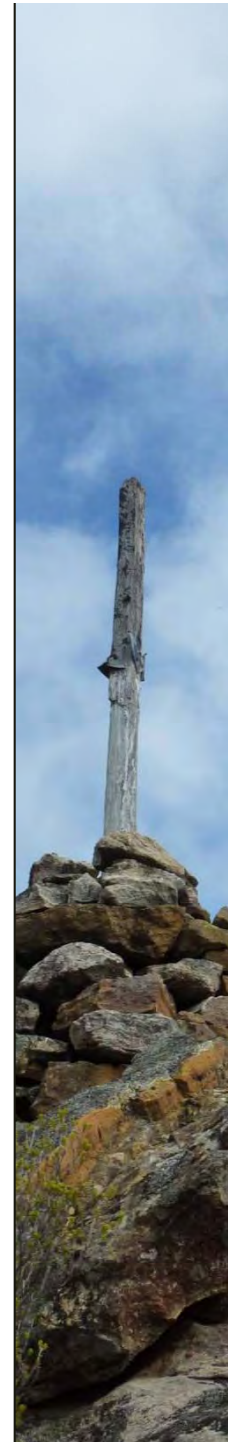
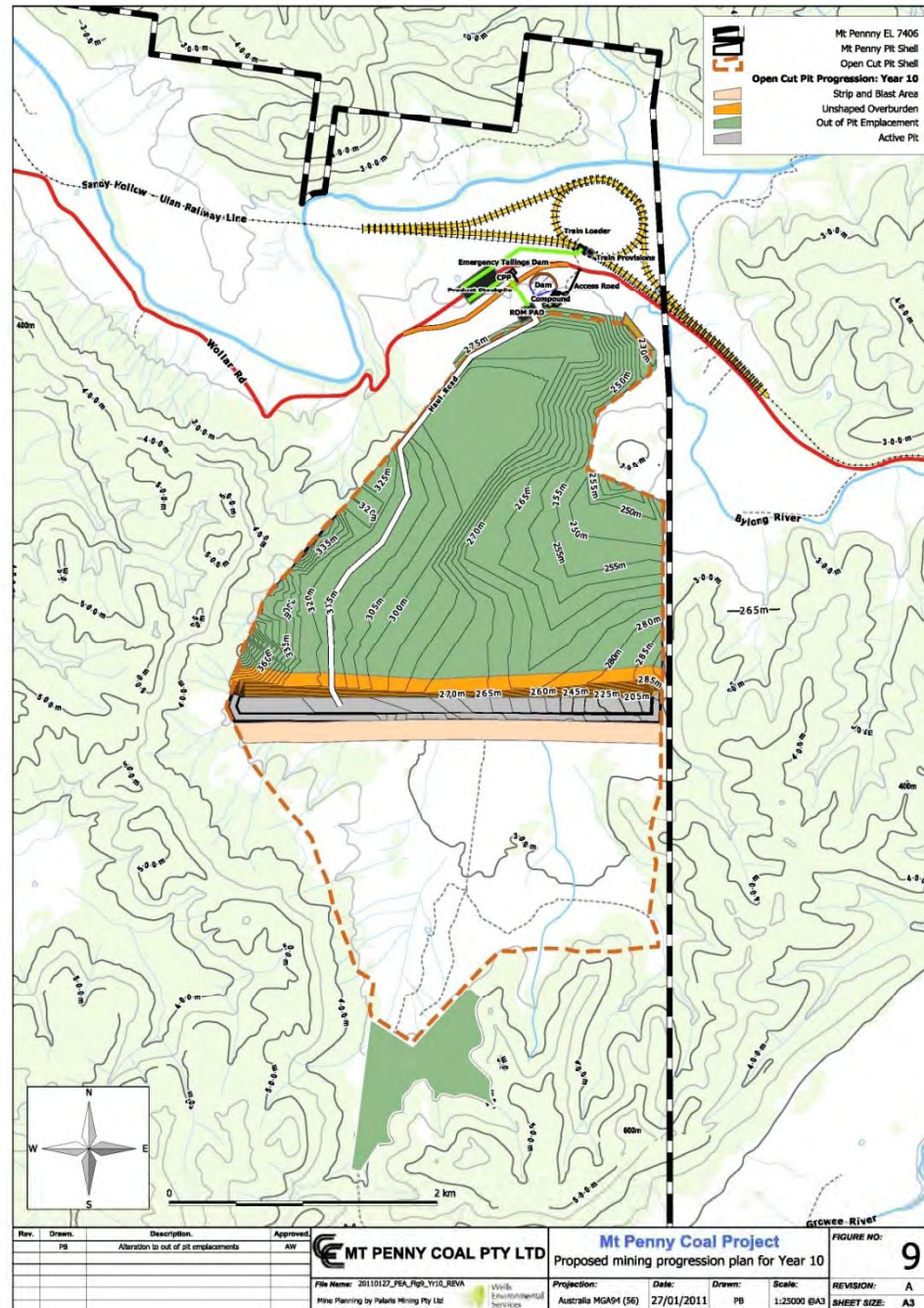
Year Three - Mine Plan



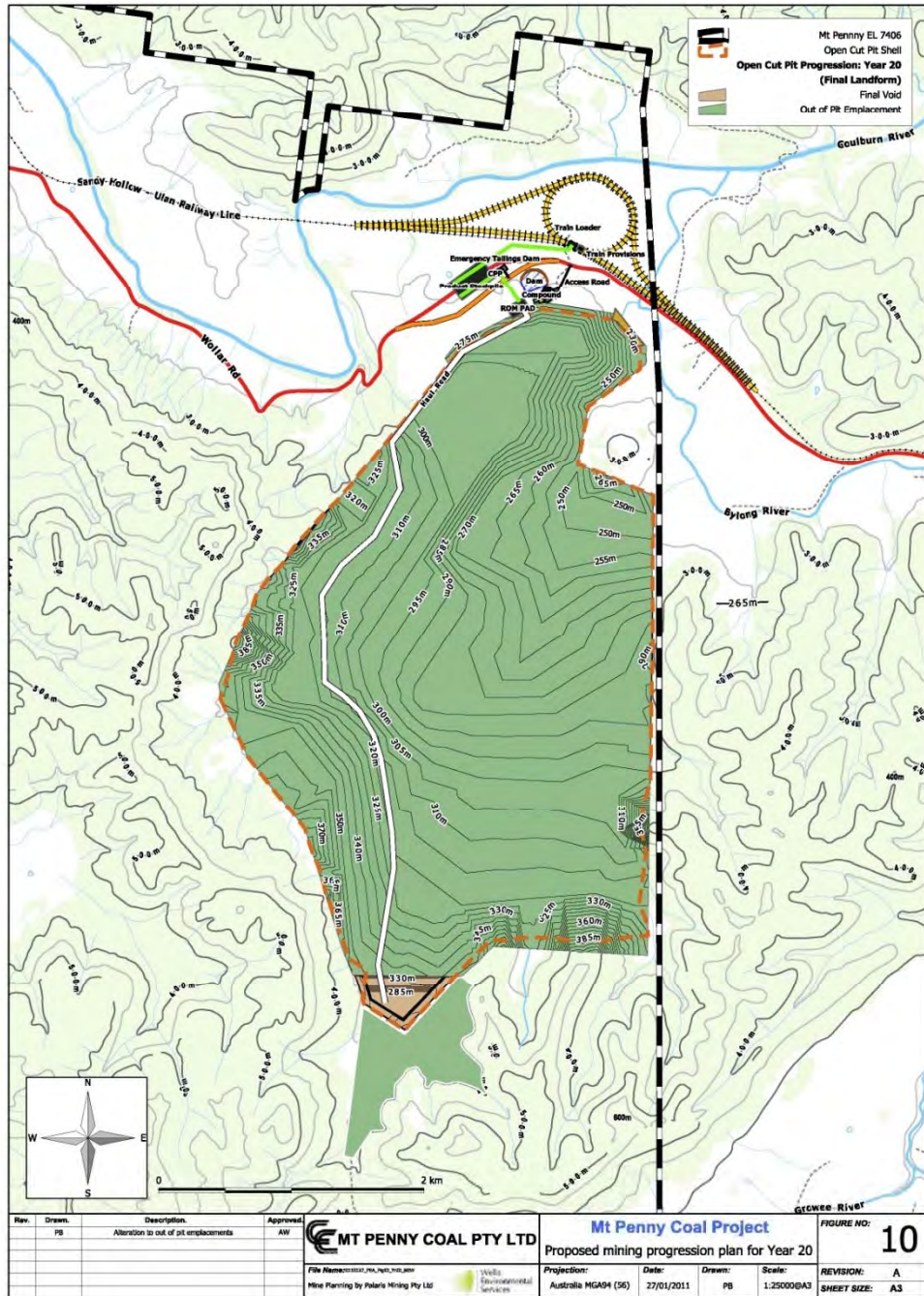
Year Five - Mine Plan



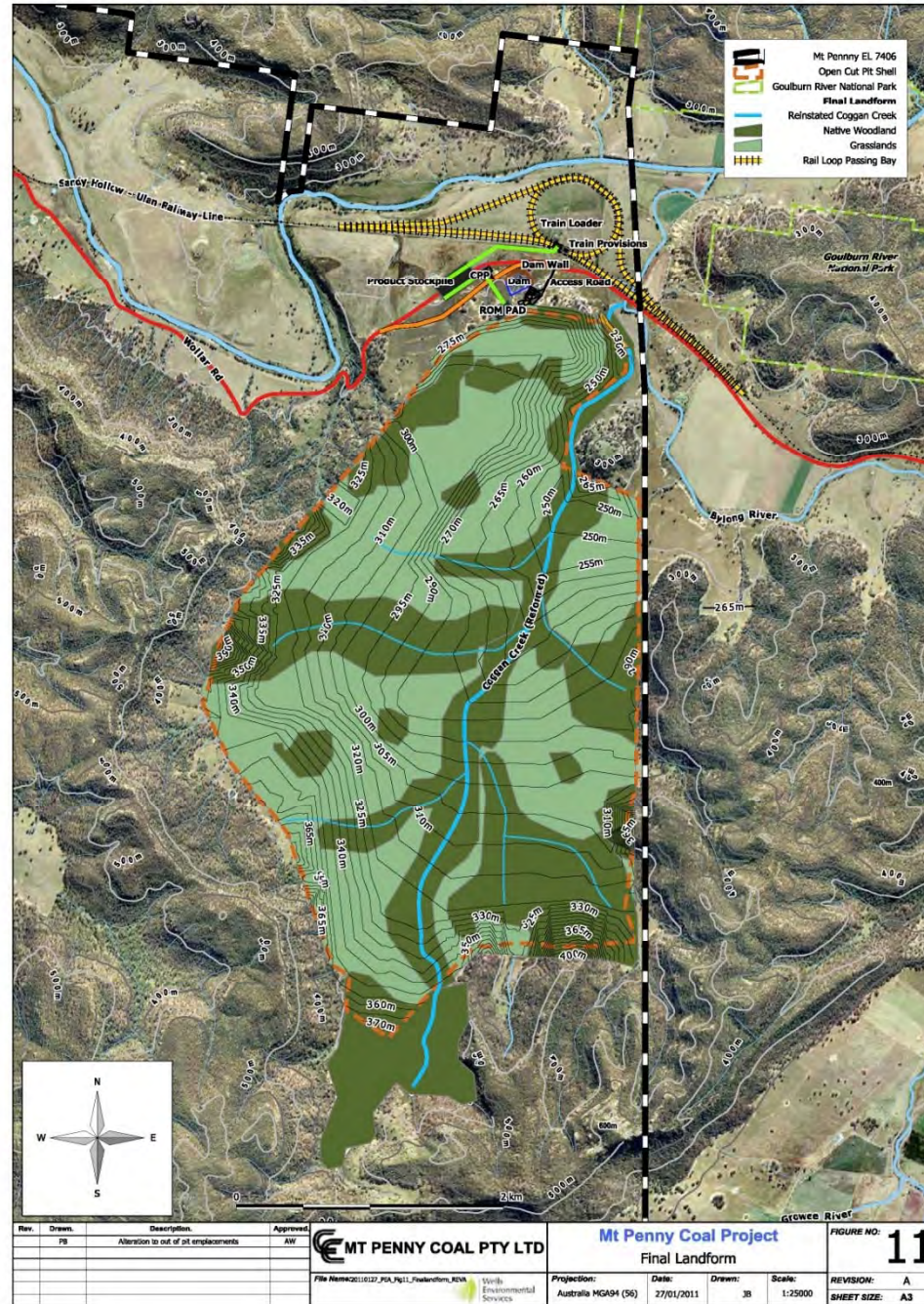
Year Ten - Mine Plan



Year Twenty - Mine Plan



Final Landform



Rehabilitation

- Rehabilitation will be progressive commencing in the north and moving south behind the mining activity.
- Rehabilitation will consist of mosaic of native grasses and woodland.
- There will be a low intensity of grazing in selected areas.
- Coggan Creek will be reinstated progressively behind the mining activity.
- In-pit dumps will be seeded with grass only for stabilisation.
- The final void will be refilled using material from the southern emplacement.
- Water capture in dams ahead of mining activity will be utilised for operations in preference to borefield.





Utilities & Site Infrastructure

Alan Wells

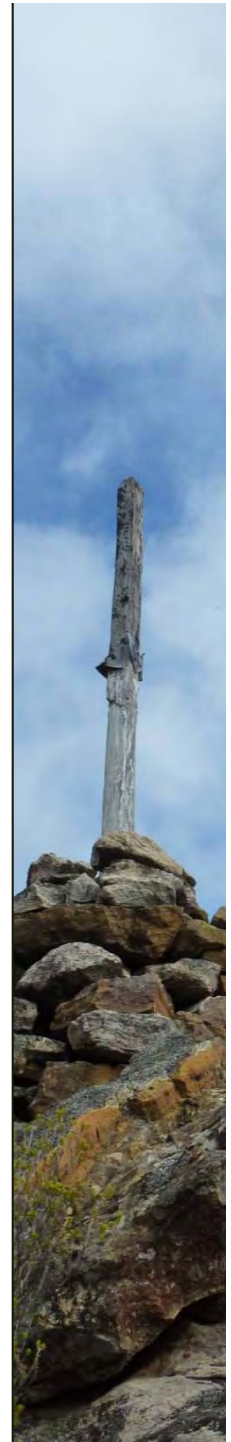
Utilities

▪ Rail

- Sufficient rail capacity to cater for production from Mt Penny;
- New passing lanes to be constructed at Wollar and Bylong;
- Construction of a train provisioning facility to provide fuel, oil, sand and cleaning services.

▪ Power

- Load estimates for Project indicate power requirement of 6.5Mva sourced from Bylong sub-station.
- A feeder line will be constructed generally within the road reservation.
- Integral Energy have confirmed that power can be supplied to the project, a Connection of Load Application has been made.



Utilities

- **Water**

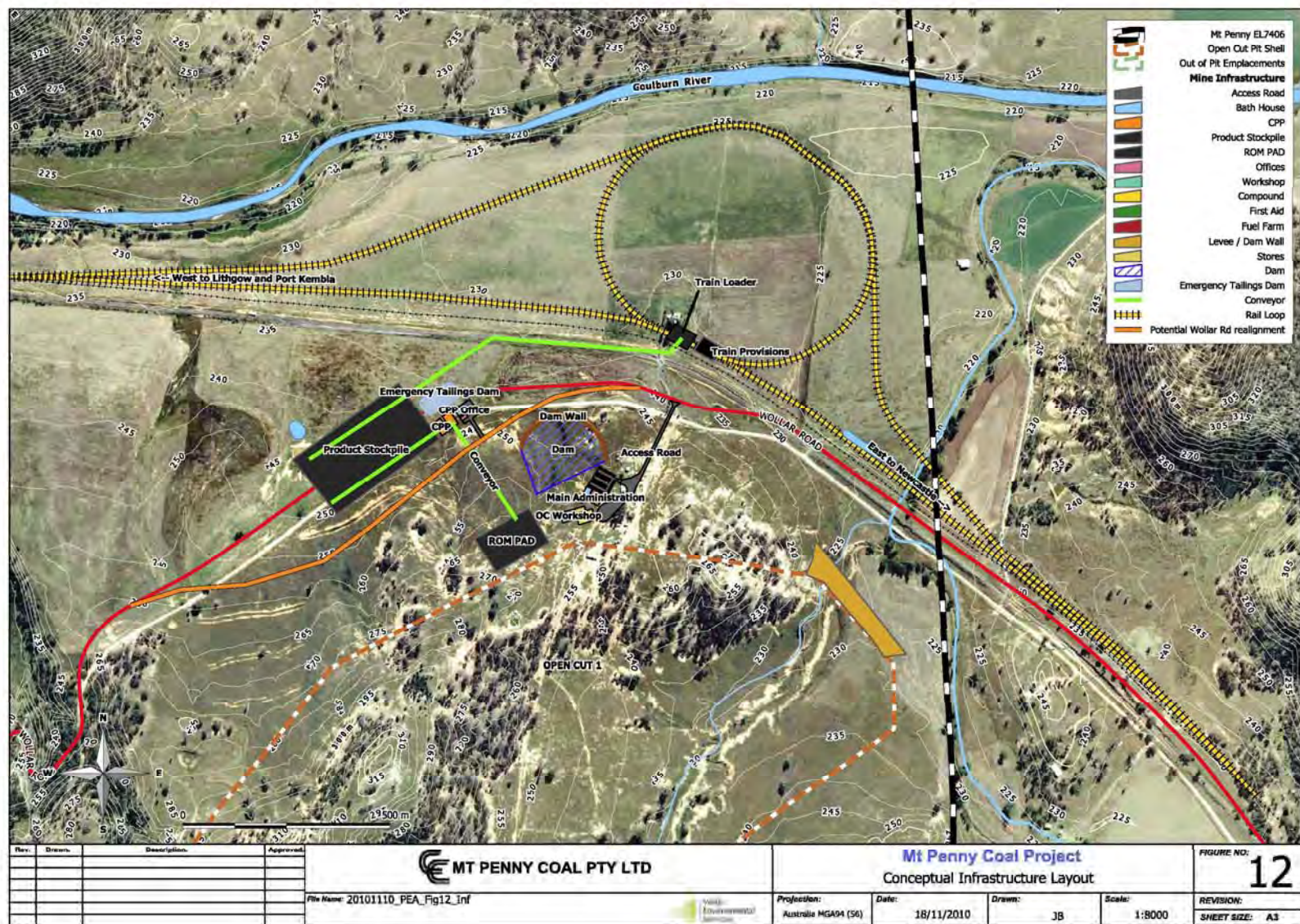
- Have rights to acquire 1,500ML of existing Water Access Licences ("WALs") in the Bylong River Catchment, which will be sufficient for mine operations and washery.
- Ongoing consultation to acquire additional WALs.
- Water capture in dams ahead of mining activity will be utilised for operations in preference to borefield.

- **Port**

- PWCS has been identified as the most likely port for export.



Proposed Infrastructure Layout





Environment & Community

Alan Wells

Key Environmental Features

- Goulburn River to north, Bylong River to east;
- Goulburn River National Park to north;
- Coggan Creek flows (intermittent flows, depending on rain fall) through open cut;
- Open cut topographically sheltered to west, south and east by high ridgelines (250-300m on valley floor to 500m on ridge);
- Minimal dwellings in close proximity;
- Largely cleared and heavily grazed (sheep) valley floors with timbered ridges.



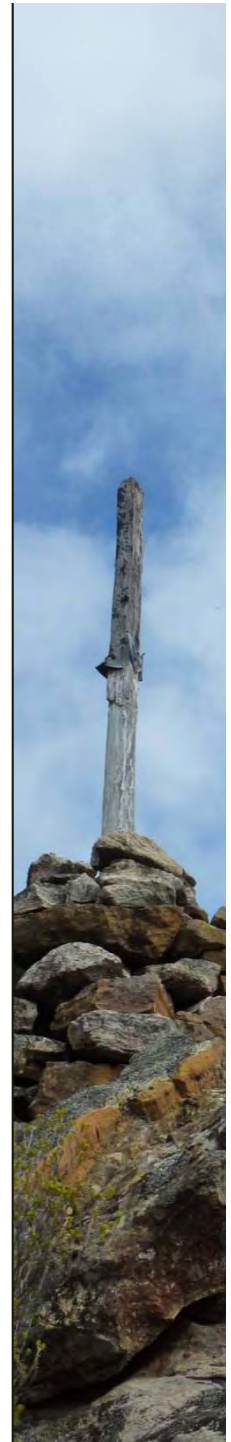
Community Engagement

- So far:
 - One on one discussion with landowners;
 - Establishment of land access agreements;
 - Training and employment of locals to undertake environmental monitoring;
 - Aboriginal stakeholder register;
 - Onsite meeting with DECCW, NOW, DII, LPMA and MWRC;
 - Private briefing sessions held with MWRC.
- From here on:
 - Meeting with the BVPA;
 - Newsletters;
 - Open days;
 - Continue one on one discussion;
 - Further briefings for local Council and elected members;
 - Further briefings for regulatory authorities.



Project Pathway

- Grant of EL 7406 and exploration to determine coal resource;
- Development of conceptual project development plan;
- Major Project Application made to DoP;
- Lodgement of Preliminary Environmental Assessment to DoP to obtain Director General's Requirements;
- Specialist studies being undertaken;
- Draft Environmental Assessment Report being prepared;
- Final Environmental Assessment Report and Public Exhibition;
- Response to submissions from Public Exhibition;
- Potentially scrutinised by a Planning Assessment Commission;
- DoP and Minister for Planning make determination on Project;
- Application for Mining Lease and preparation of EMPs
- Commence construction of Project.

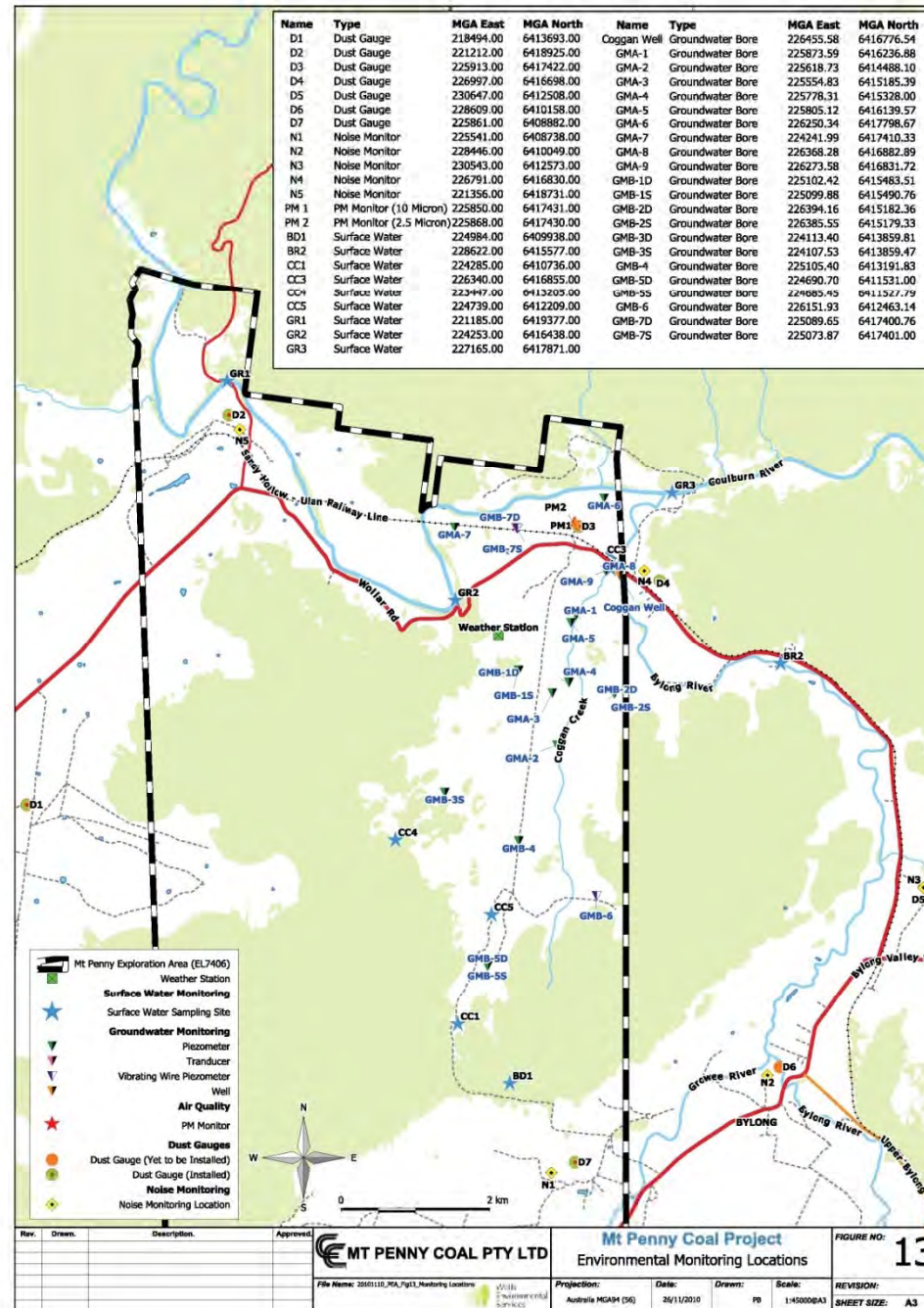


Environmental Investigations

- Air Quality and Noise
 - Network of 7 dust gauges (5 installed);
 - 1 HVAS PM10 monitor installed and operating;
 - 1 HVAS PM2.5 being installed;
 - Weather station operating onsite;
 - Noise monitoring sites selected, baseline in March 2011.
- Comments
 - Few dwellings;
 - Well sheltered by topography;
 - Impacts to Bylong village not expected;
 - Employment and training of locals to undertake monitoring.

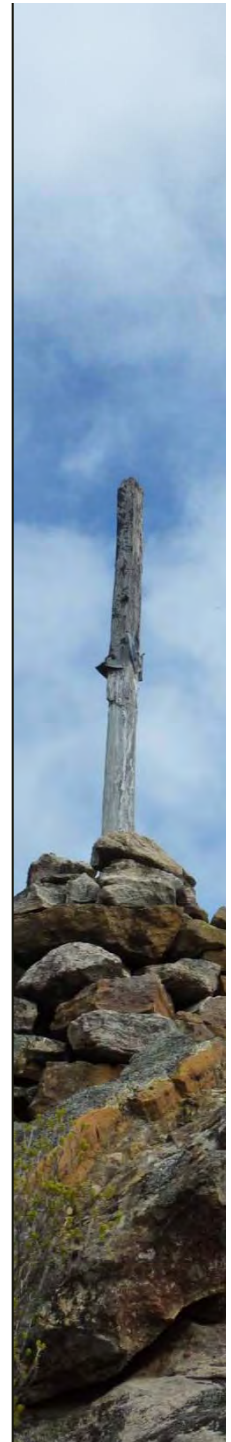


Monitoring Plan

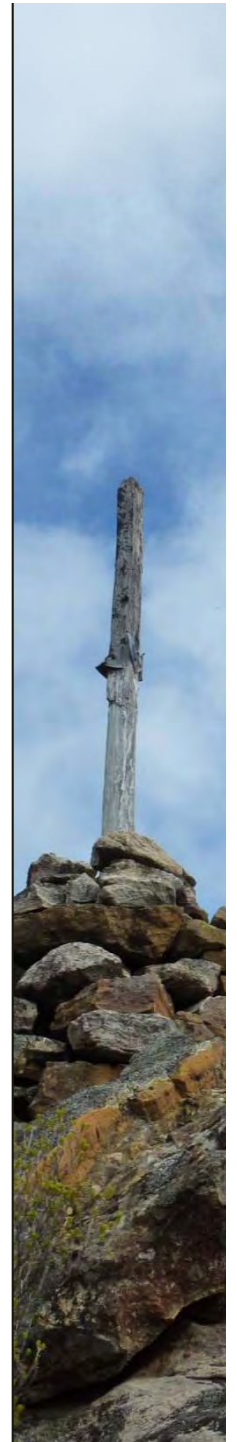
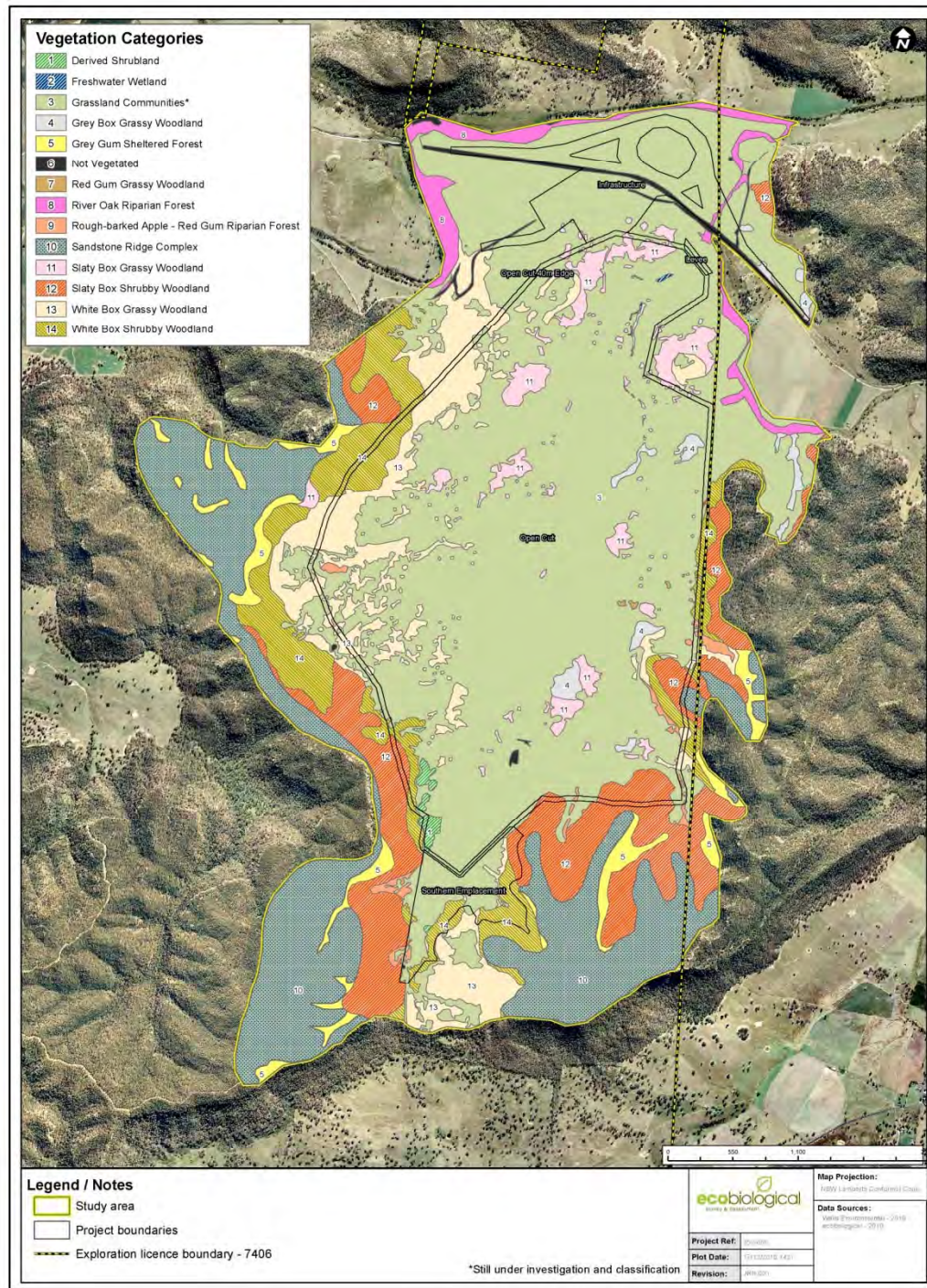


Environmental Investigations

- Flora, Fauna and Aquatic:
 - EcoBiological Pty Ltd engaged to prepare flora and fauna assessment;
 - Ecology report currently subject to an independent review.
 - Marine Pollution Research completing aquatic surveys;
 - 3 seasonal (spring, summer and winter) surveys undertaken;
- Comments:
 - Mine design has avoided timbered vegetation where possible;
 - Impacts to two EECs - White Box Yellow Box Blakely's Red Gum Woodland (and associated CEEC) and Hunter Valley Foot slopes Slaty Gum Woodland in the Sydney Basin Bioregion;
 - Offsets will be required, program in place to identify and investigate sites for inclusion in Environmental Assessment Report;
 - No significant aquatic species within the Project Area.

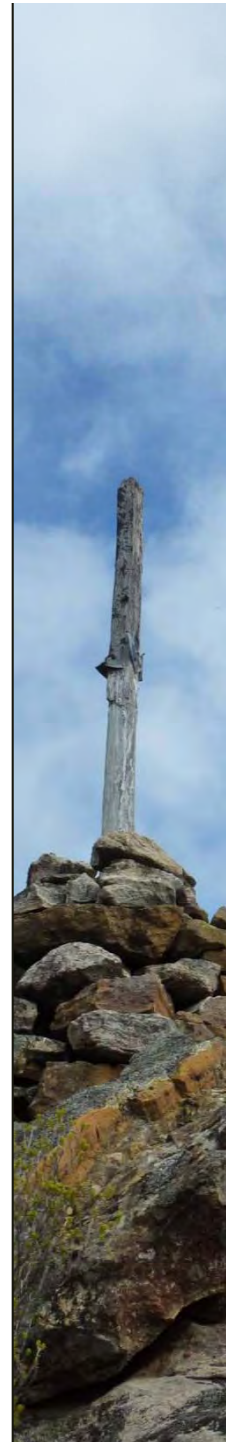


Vegetation Mapping



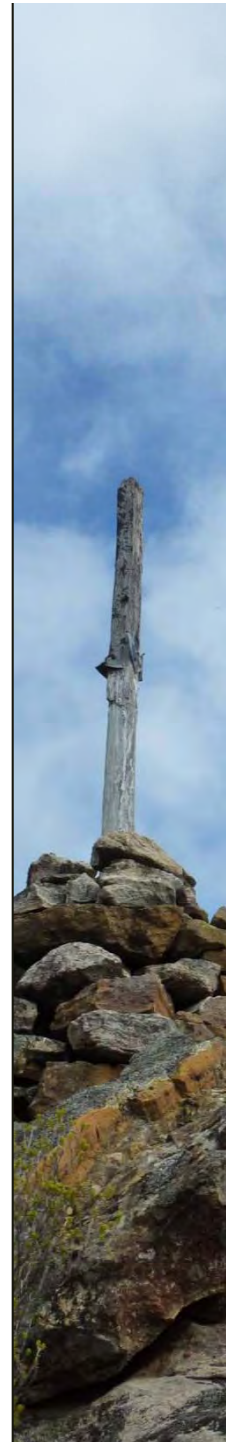
Environmental Investigations

- Aboriginal Heritage:
 - Archaeological Risk Assessment Services have been engaged;
 - Register of 28 Aboriginal stakeholders established as per DECCW guidelines;
 - Stakeholder meeting held in Mudgee in May 2010;
 - Dr Peter Mitchell completed a geomorphic assessment of the study area;
 - Survey teams established and field survey commenced in October and completed in late December 2010.
 - Powerline survey to be completed in March 2011.



Environmental Investigations

- Results of Survey
 - 4881 Aboriginal objects from 164 sites, made up of; 27 artefact scatters, 57 isolated finds, 3 scarred trees, 78 artefact scatters with PADs, 1 isolated PAD and 4 partially intact hearths.
 - Majority of sites associated with Coggan Creek and Bylong River.
- Path Forward
 - Summary report to be provided to Aboriginal stakeholders with meetings to discuss.



Environmental Investigations

- European Heritage
 - Two house sites and several sheds within the Project area;
 - No registered sites within the Project area.
 - Heritage consultant to be engaged.



Environmental Investigations

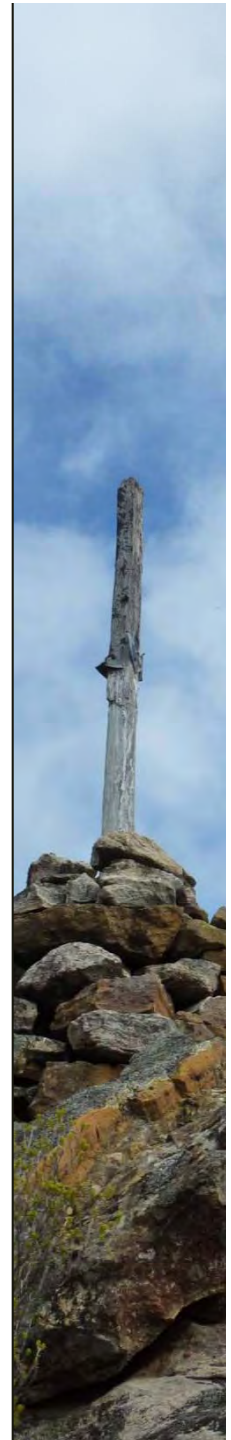
- Groundwater:
 - Hydroilex Pty Ltd, undertaking field investigations;
 - RPS Aquaterra undertaking modelling and impact assessment;
 - 21 piezometers installed with monthly depth and quarterly sampling commenced;
 - Nested and single piezometers in hard rock and alluvial aquifers;
 - Falling Head Tests carried out on 8 bores.
- Comments
 - Coal measures are compact and have low conductivity;
 - Subsurface water EC ranges from 2,500 to 6,000, compared to surface water 750Us/cm;
 - pH is generally neutral.



Environmental Investigations

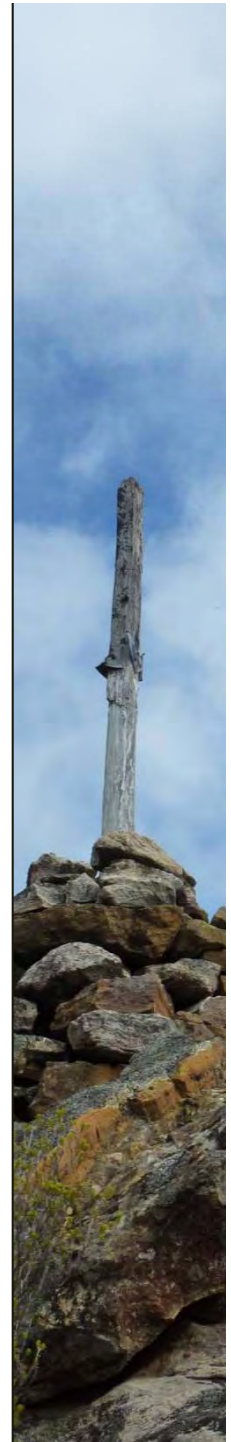
- Surface Water and Flooding
 - Specialist consultant to be engaged to assess flooding and surface waters;
 - Four surface water sites being sampled and analyzed on a monthly basis;
 - Census of water to be completed;
 - Coggan Creek (intermittent flows, depending on rainfall).

Monitoring Locations	pH	EC
Goulburn River 1	8.31	719
Goulburn River 3	8.02	725
Bylong River 2	7.9	2,300
Coggan Creek 3	8.49	3,660



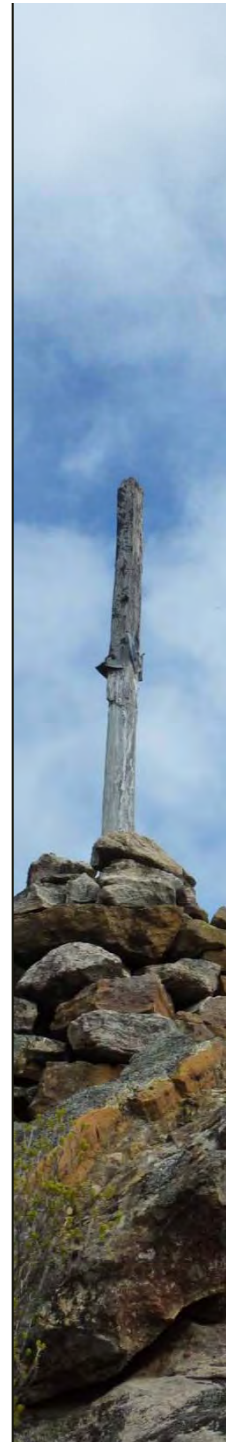
Environmental Investigations

- Acid Rock Drainage (“ARD”):
 - EGI commissioned for ARD assessment;
 - 190 samples taken during drilling, analysis underway;
 - Permian sequence is primarily a freshwater sequence;
 - Based on other mines in region, no significant issues expected;
 - Coggan 2 seam has a transitional marine setting, and underlying Berry Formation is known to be potential acid forming;
 - Coal and slimes also regionally known to be potential acid forming at low concentrations.



Environmental Investigations

- Other Studies to be undertaken include:
 - Soils and agricultural potential;
 - Rehabilitation and mine closure plan;
 - Visual Impact Assessment;
 - Social and Economic Assessment;
 - Transport – Road and Rail assessments;
 - Preliminary Hazard Analysis;
 - Utility infrastructure;
 - Any other studies that may be required within the Director General's Requirements.



Thankyou

- Questions:

