

# RUSSELL VALE UEP

Revised Mine Plan:  
Presentation to CCC  
06 June 2017



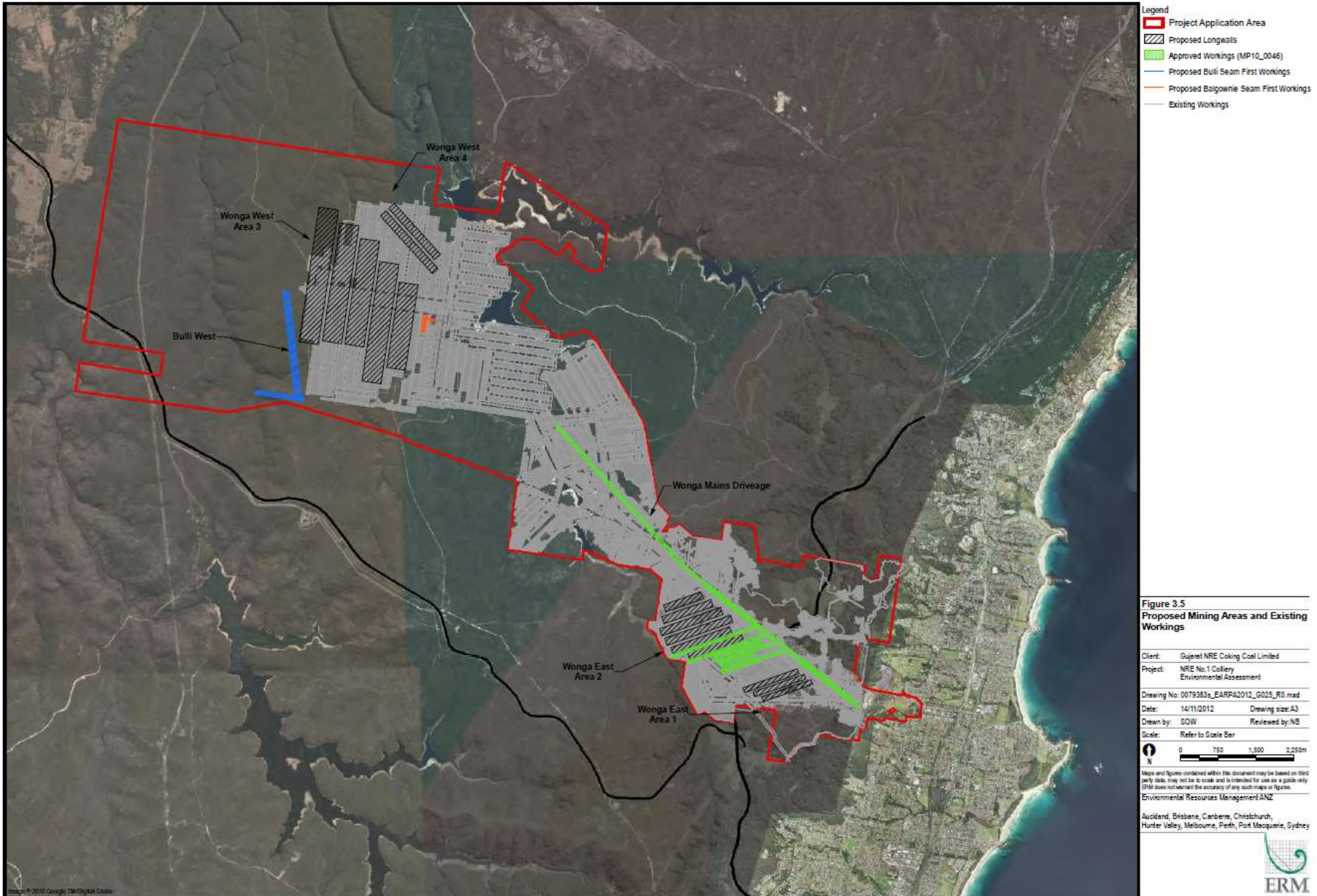
## Background to Revised Project

**UEP is a Part 3A Application – initially lodged in 2009**

**EA publically exhibited in early 2013**

- Original EA included longwall mining in Wonga East (9 additional longwalls) and Wonga West (7 longwalls) areas.
- Development works in Balgownie Seam and Bulli Seam in Wonga West area
- 18 Year LOM
- Approx 32 Mt ROM
- Up to 3Mtpa ROM

# Original UEP Mine Plan



# Background to Revised Project

## Preferred Project Report

- Revised Mine Plan reduced this to 8 additional longwalls in Wonga East area (longwalls 4 and 5 already approved under Preliminary Works Approval).
  - Longwall Mining
  - 5 year LOM
  - 4.7Mt
  - Mining up to 3Mtpa
  - Road haulage – Bellambi Lane



# Background to Revised Project

## Wonga East Area

### Multi seam mining environment

- Bulli Seam and Balgownie Seam and 2 ½ longwall panels in Wongawilli Seam mined previously
- Target seam for UEP is Wongawilli Seam
- Depth of cover between 250m and 360m
  - Cataract Reservoir approximately 300m
  - Cataract Creek 250-300m

## Background to Revised Project

- **2 Previous PAC Assessments on Preferred Project Mine Plan**
- **Key Issues raised By PAC in First and Second Review Reports**
  - Water and Subsidence
  - Impacts on Upland Swamps
  - Ability to satisfy *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011* neutral or beneficial effect (NorBE) on water quality requirements
  - Socio-Economic Benefits and Impacts
  - Noise
  - Bellambi Creek Flood Management
  - Traffic and Transport

## Development of Revised Mine Plan

Umwelt engaged to conduct a further environment and community constraints analysis and work with WCL and their mine design consultant (Palaris) to advise on any necessary project revisions/additional assessment required to address PAC issues.

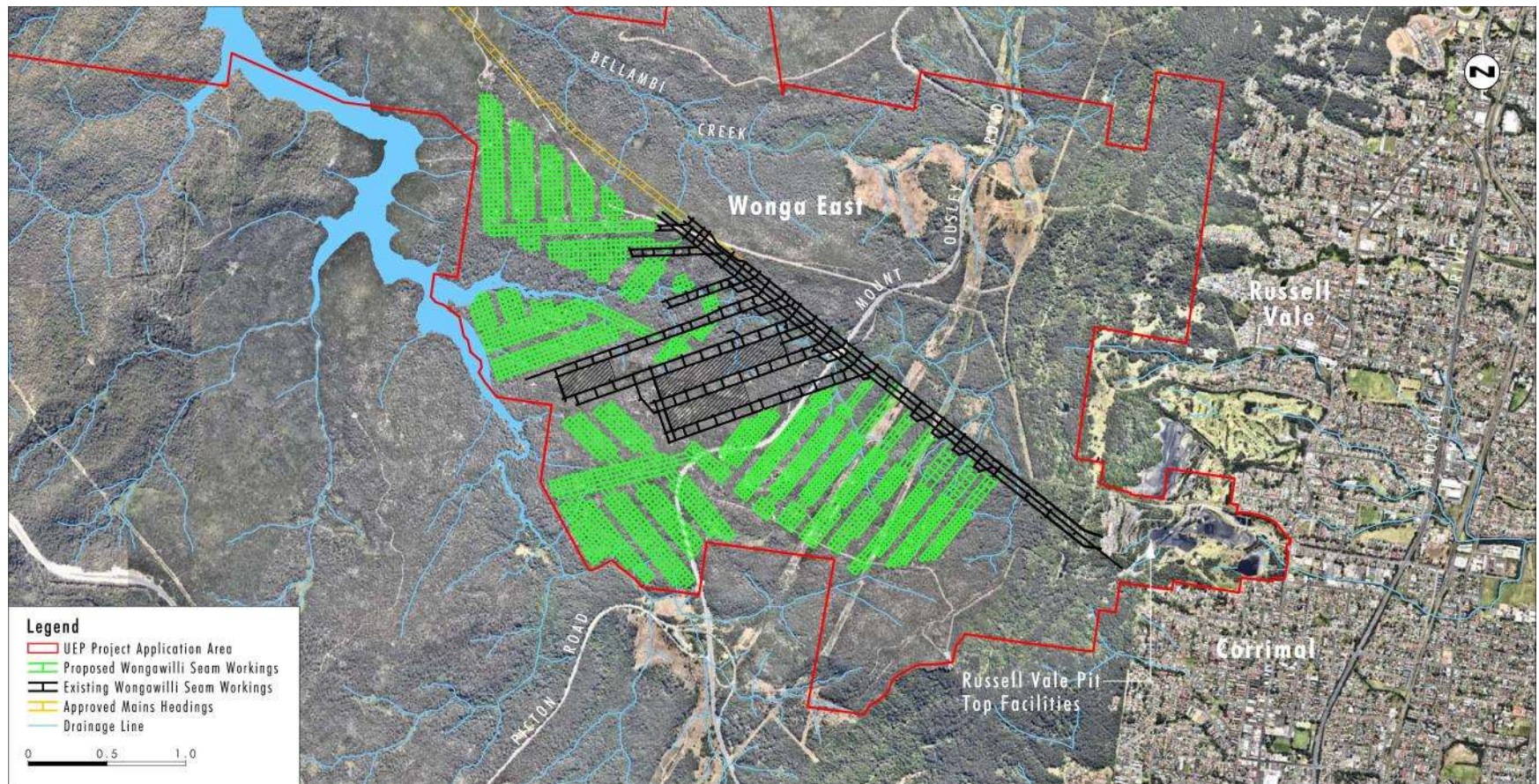
Key mine plan/assessment considerations:

- A mine plan which addressed PAC concerns including NorBE requirements
- LOM of at least 5 years to provide sufficient time for necessary studies and approval process for mining in Wonga Central and Wonga/Bulli West areas.
- Financial viability

## Revised Project

Project Component	Summary of the Project
Target Seam	Wongawilli
Mining Method	Non-caving first workings bord and pillar production using standard in-place continuous miners
Mining Height	Approximately 2.4m
Pillar Design	The pillars remaining will be stable with pillars of a dimension to have a probability of failure of less than one in one million. Factor of Safety of 2.1 or greater
Predicted Subsidence	Nil-Negligible (<20-30mm)
Life of Project	5 years
ROM Coal (total)	Approximately 3.7 Mt
Product Coal (total)	Approximately 3.4 Mt
ROM production rate	Up to 1 Mtpa



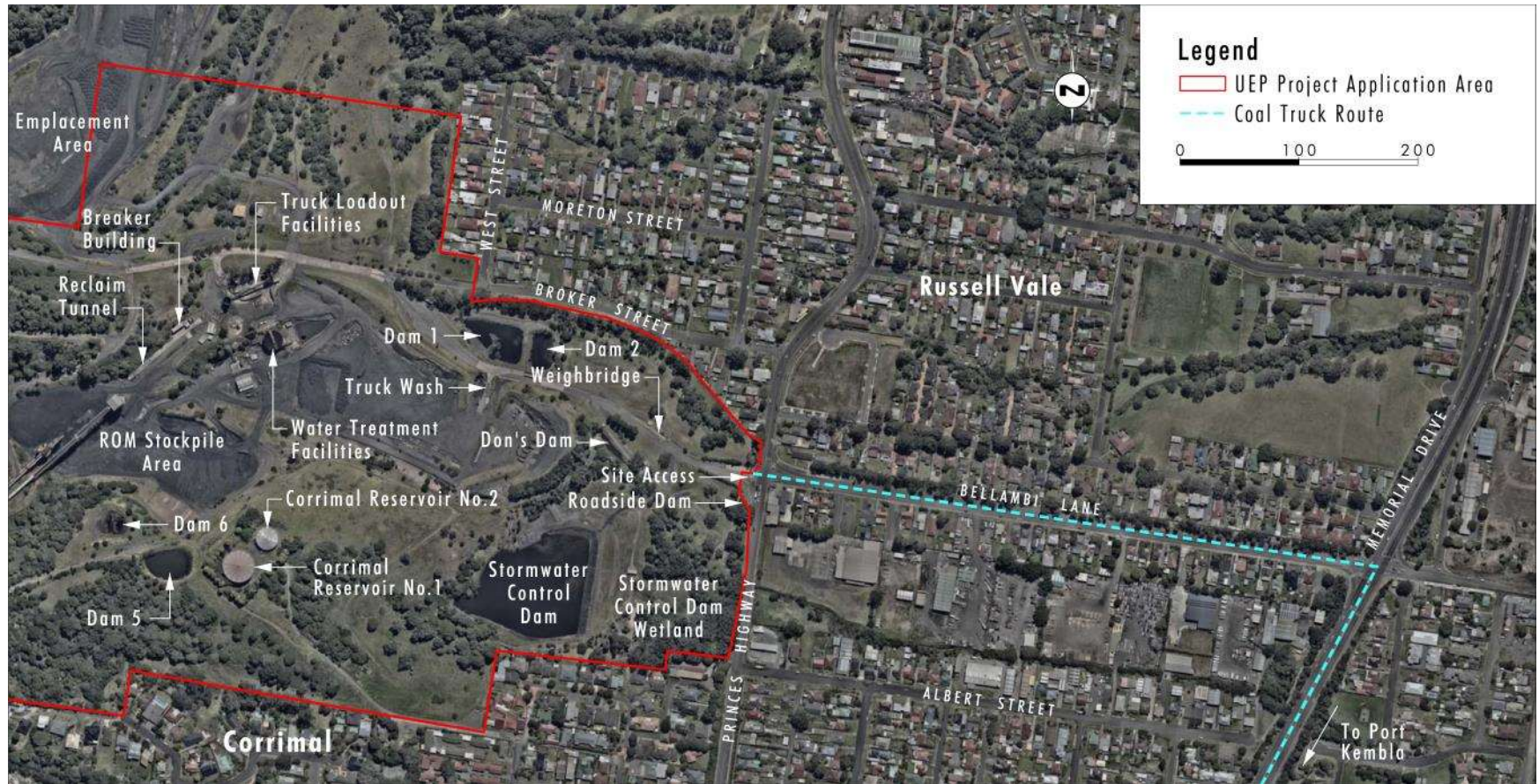


## Revised Mine Plan

## Surface Operations

- Reduced production rate – up to 1Mtpa ROM
- Coal processing plant to improve coal quality – designed to be low noise
- Reduced stockpile size
- Rejects or plant waste disposed in RVEA, underground or disposed of as VENM (trucked offsite)
- Road haulage –16 outbound coal trucks per hour during day time (average)
- Predominately day time hauls – haulage to 10pm if required but at reduced rate (average of 12 per hour)
- 40km/h speed limit on-site
- 50km/h speed limit for coal and waste trucks retained but 95% compliance objective





## Pit Top and Local Area



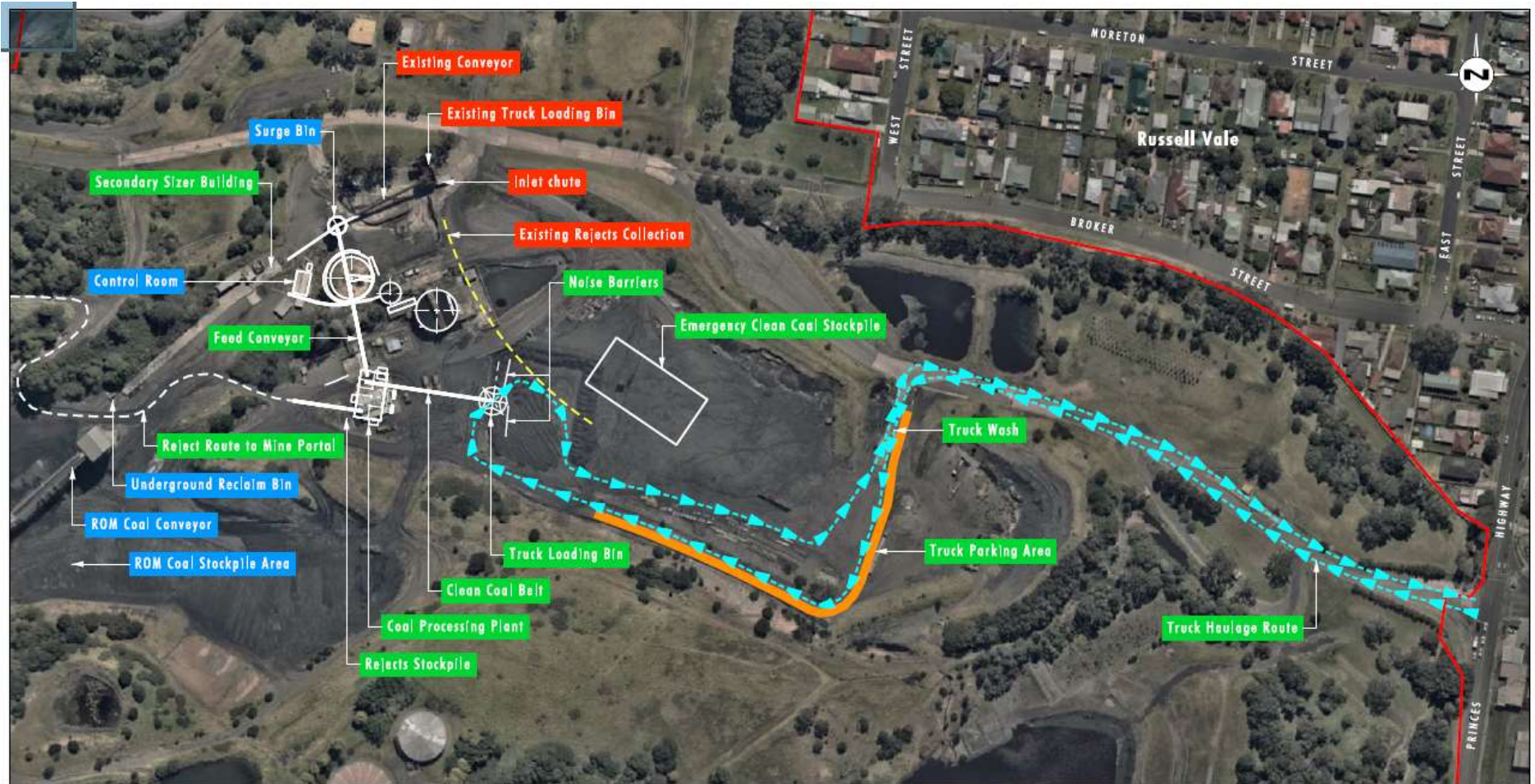


Image Source: Nearmap (Oct 2016)  
 Data Source: Wollongong Coal (2016)

### Legend

- UEP Project Application Area
- Infrastructure to be Removed
- Existing Infrastructure
- Infrastructure to be Constructed
- 200m Zone

## Coal handling and processing area

## Water and Subsidence

PAC concerns related to:

- Uncertainty regarding historical subsidence impacts
- Potential for pillar run in parts of old workings in Bulli Seam resulting in connectivity between Cataract Reservoir and workings
- Potential for connective cracking to surface below swamps and creeks
- Uncertainty in groundwater impacts associated with subsidence and potential for horizontal flow paths being activated
- Geological structures (eg Corrimal Fault and Dyke D8)
- Risks associated with long term recovery of water in workings
- Ability to satisfy *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011* (NorBE) water quality requirements

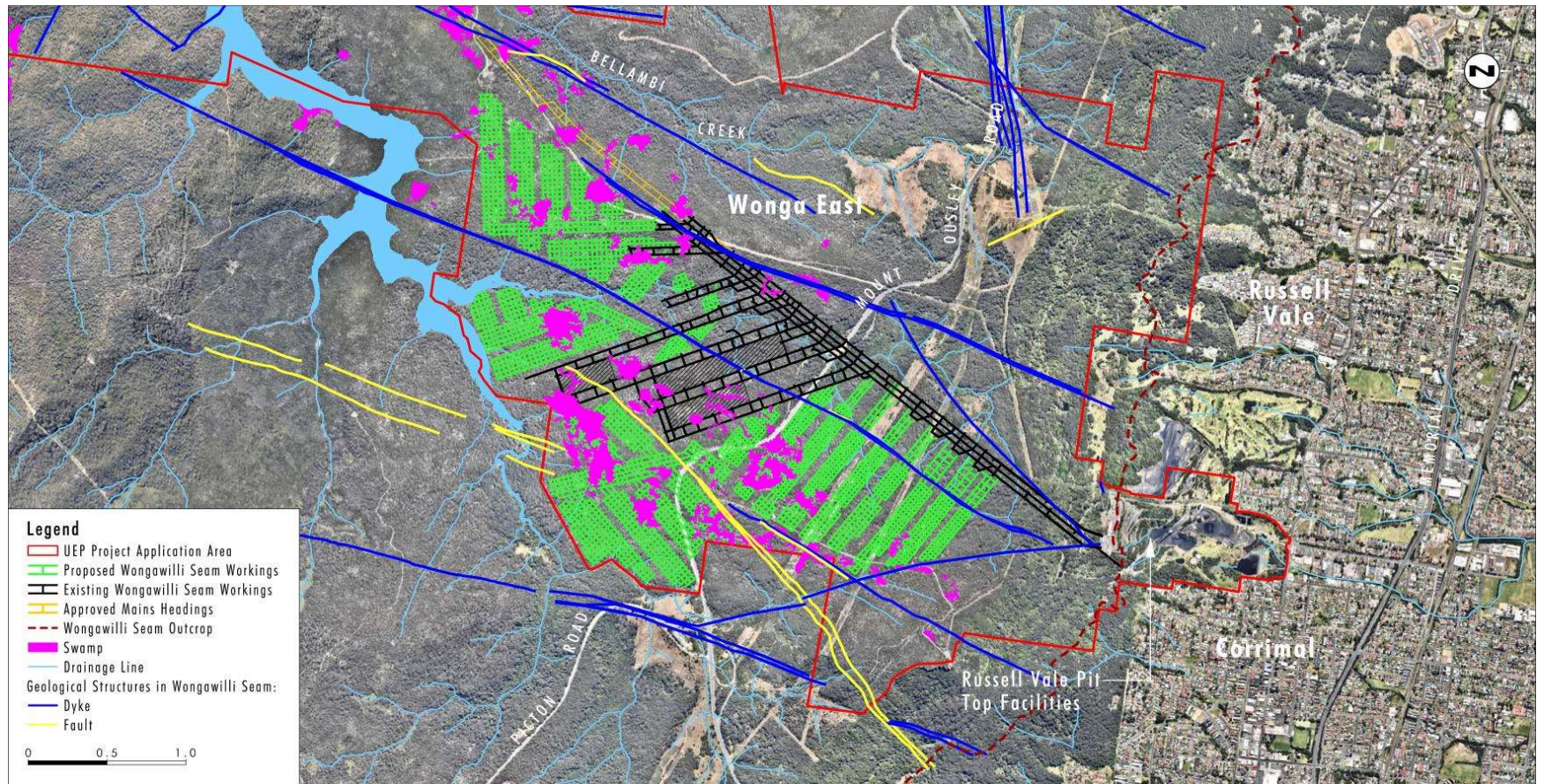
## Water and Subsidence – Design Features

Key water and subsidence impacts managed through mine design to avoid impacts.

Revised Project addresses concerns through:

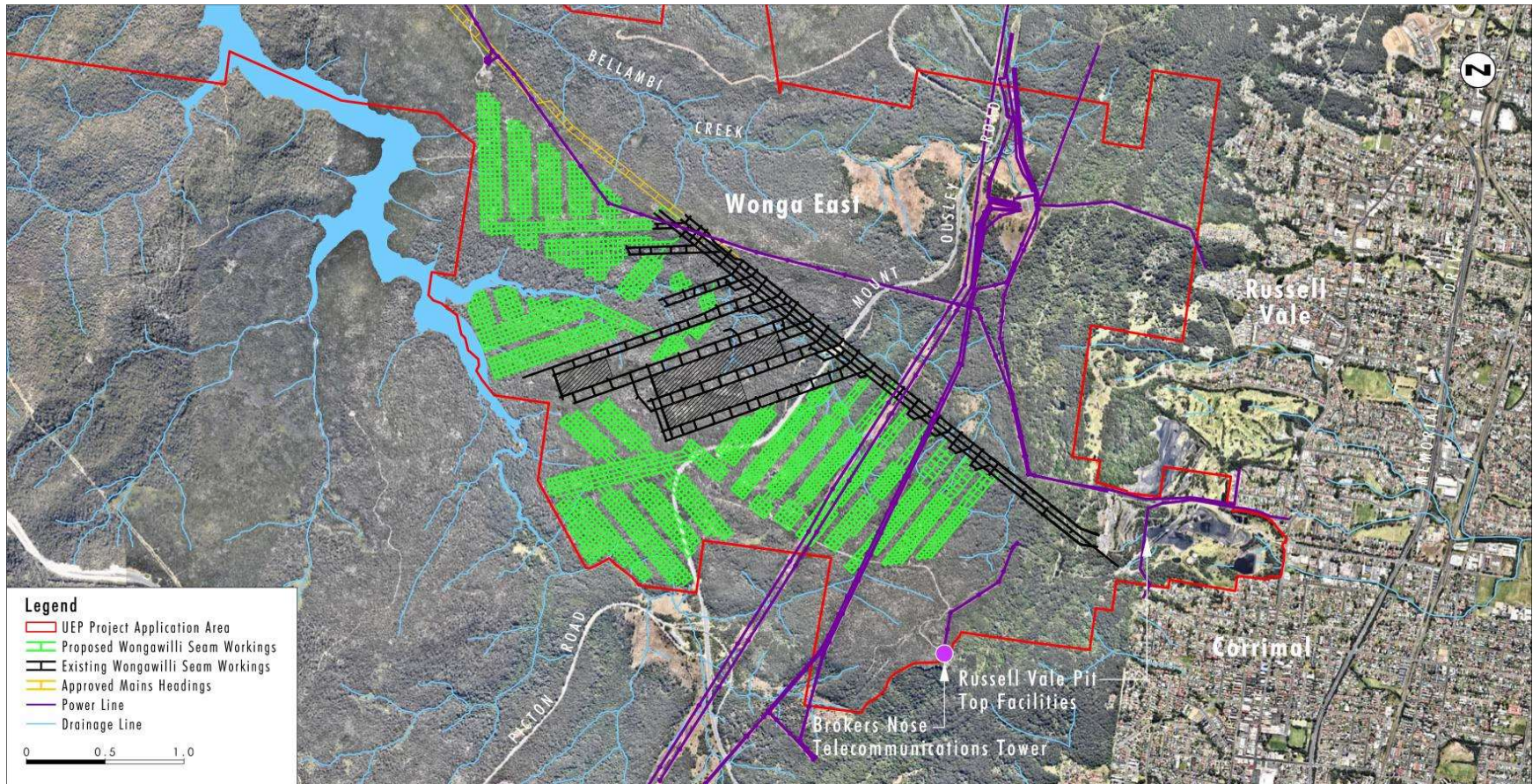
- Nil or negligible subsidence through stable pillar design (failure probabilities of less than one in one million, Factors of Safety of 2.1 or greater)
- limiting workings through faults and dykes to first workings where any ingress can be sealed
- stable pillar design avoids need for dewatering of former workings
- nil-negligible subsidence impacts associated with proposed mine plan which avoids potential impacts on surface features such as swamps and creeks and improved certainty in groundwater modelling
- no mining under high water mark of Cataract Reservoir





## Hydrology Constraints





## Built Infrastructure

- Reduced production rate relative to earlier plan
- Coal Processing Plant and loading operations designed to minimise noise
- Reduced trucking rate relative to earlier plan
- Trucks parked on site while awaiting loading
- Reject material hauled to pit top by truck for disposal underground
- Approval for Bellambi Gully Cardno Design being pursued through separate modification process.

## Further studies undertaken for Revised Project

Geotechnical Assessment being prepared by SCT to cover potential for subsidence.

- Preliminary work indicates negligible subsidence (including horizontal movement) from proposed mine plan

Groundwater Assessment being undertaken by Geoterra and GES.

- Comments from Dr Mackie in PAC being considered in groundwater Model set-up
- Model to be calibrated to most recent data collected
- Review of Model by WaterNSW (Pete Dupan)
- Peer Review of Model prior to being run (Will Minchin)

Ecology, Aboriginal Cultural Heritage and Surface Water (above mining area)

- Limited impacts predicted due to negligible subsidence impacts.

Noise, Air Quality, Traffic, Surface Water, Economic, SIO and Greenhouse assessments being undertaken/updated for revised Project



# Consultation Program

Comprehensive Consultation Program Proposed which includes:

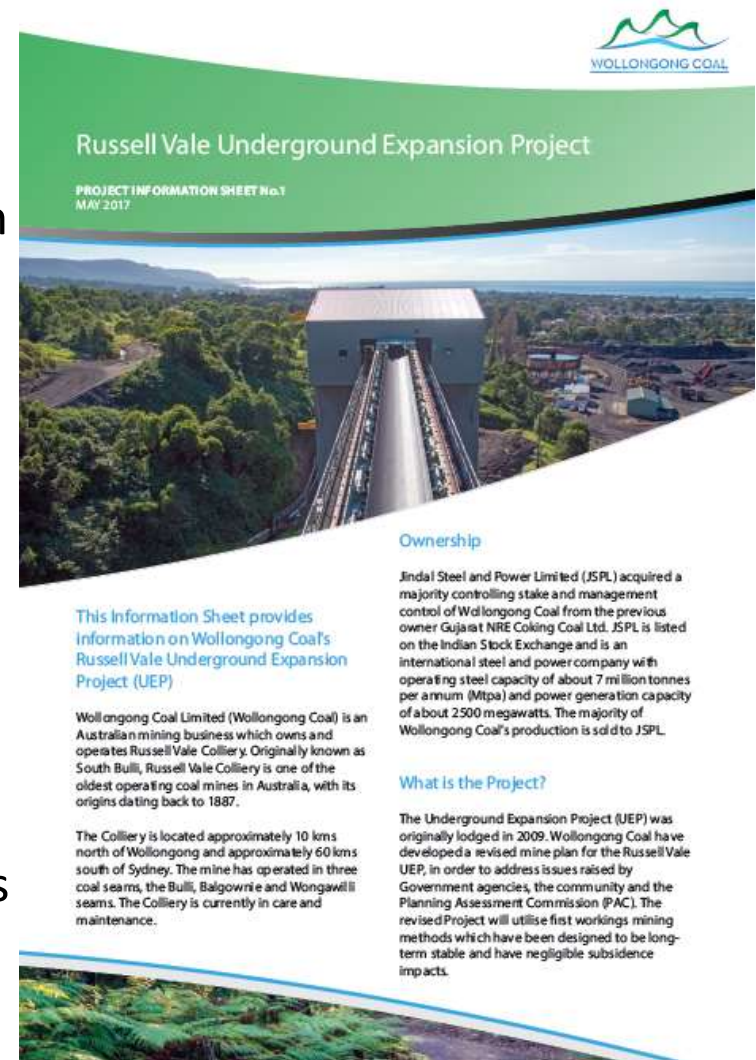
- WaterNSW (Briefing meeting complete), DP&E - DRAM (next week), DPI Water, OEH, EPA following results from studies
- Wollongong Council (Project briefing and briefing on assessment findings)
- CCC (Project briefing and briefing on assessment findings)
- DotEE
- Near neighbours to Pit Top and Bellambi Lane
  - One on one meetings
  - Newsletters
  - Community Information Day

# Local Stakeholder Consultation to-date

Russell Vale  
UEP Revised Project

The purpose of the issue scoping phase is to understand the issues and concerns residents and stakeholders have in relation to the development as well as preliminary thoughts on potential mitigation measures.

1. Project Information Sheet (around 1500 distributed North, East and South)
2. Residents in both the northern and southern areas proximal to the site have been contacted.
3. Followed up with letters where messages have been left.
4. Calls have been made to community groups and local schools and appointments schedule
5. 32 personal interviews with landholders, businesses and community groups





# Consultation summary

Russell Vale  
UEP Revised Project

Contact status	Frequency
Overall contacts	134
Telephone calls	122
Targeted door knocks	12
Completed interviews	32
Declined - Other	29
Declined – No issue	12

# Community Information Display

Russell Vale  
UEP Revised Project

- Set date – end June
- Corrimal Library
- Development of posters summarising consultation to-date and outcomes of key assessments – water, noise, traffic, dust etc



**Environmental Assessment**  
Invincible Southern Extension Project

## Why local employment mattered

You told us you saw how the Project is linked to injecting life and greater economic prosperity into Cullen Bullen through employment, and were happy about the possibilities of flow on effects in terms of increasing the population and service provision in Cullen Bullen.

Manildra will need to employ an estimated 35 people which includes 22 in production, 7 staff, 6 in maintenance and 4 part time contractors.

Manildra's intention is to source employees as far as practicably from the local area, with a targeted employment breakdown as shown. Local will focus on Cullen Bullen but may need to extend to Portland and Lithgow.

Under this scenario even a 20% (7 people) draw from outside the area would see the population increase in the local by up to 81 people depending on commuting arrangements and other age factors.



**Anticipated Workforce Breakdown:**

- Local Area - Cullen Bullen, Portland & Lithgow
- Other Areas

*"Without it [the Project] the town will die."*

*"The town needs a boost."*

***"We have lost families, we need local people employed."***



## Community Information Display No.2

### Invincible Southern Extension Project

Manildra's Castlereagh Coal will be holding it's second community information display on Saturday 18 June, to provide an update on the results of the environmental and social studies, and for interested community members to ask any questions they may have. There will be information on the Project along with food and refreshments for you to enjoy with your friends, neighbours and the Project team.

**When: 10am - 2pm, Saturday 18 June**  
**Where: Cullen Bullen Community Hall**

We look forward to seeing you there!

If you can't make it and would like more information about the project please contact Narelle Wolfe on 0409 786 585.




# Timing

- Response to PAC Review Report to be lodged by 30 June 2017

